Amateur Radio

JOURNAL OF THE WIRELESS INSTITUTE
OF AUSTRALIA
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• Logic Probe • Houseboat on Six • Designing QSL Cards •

Amateur Radio

Cover

"Liba Liba 4" houseboat mobile on the Murray River. A 'Slim Jim' for two metres is located abaft the six metre quarter wave vertical antenna. We liked the nature of the antenna support. See "Houseboat on Six" by Richard Cortis VK2XRC on page 18.

Deadlines

	Editorial	Hamads
August	10/7/89	12/7/89
September	7/8/89	9/8/89
October	11/9/89	13/9/89

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Special Features

Technical Articles

Regular Features

Amateur Radio

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Advertising: Ann McCurdy (03) 528 5962

Material should be sent direct to PO Box 300, Caulfield South, Vic. 3162, in accordance with the deadline date shown on page 1 of this issue.

Acknowledgement may not be made unless specifically requested. All important items should be sent by Certified Mail. The editor reserves the right to edit all material, including Letters to the Editor and Hamads, and reserves the right to refuse acceptance of any material, without specifying a reason.

EDITOR'S COMMENT

Serendipity and the Do-It-Yourselfer

As I have mentioned in the last couple of issues, we have high hopes of cruising on and operating from several usually-dry salt lakes in VK5, before they evaporate back to their usual state. One pre-requisite has already been achieved; I can now go away for a month or two and leave AR in the capable hands of our new Managing Editor VK3IY! Many other pre-requisites still need attention. One of these is completion of the wind-driven generator to be mounted on the trailer-sailer, hopefully to provide at least some of the 12 volt power to keep us on the air. It is, like most of the VK3ABP equipment, home-brew. The 32 pole permag alternator (laminations from an old refrigerator) is direct-driven (no gearbox) by a one metre diameter three-bladed propellor (should I say wind-turbine?), whose blades have an outer skin which was once many aluminium cans!

More and thicker aluminium was needed for the casing to weather-proof the alternator. All I could find in my capacious junk box (in effect, the whole shack!) was too thick. Then I found, out in the garden shed, a discarded piece of heater-flue casing which looked just right; but was it aluminium? It was fairly soft sheet metal, non-magnetic, easy to cut, but it weighed too much to be aluminium. Obviously zinc. How would it go, wrapped around the aluminium end plates of the alternator? Corrosion? Where do zinc and aluminium come in the electropotential table? Where is that table? ARRL Handbook? No. RSGB Ditto? No. G3VA's "Amateur Radio Techniques"? No. (These were all books on the shack shelf.) The ETI "Radio Experimenter's Handbook" edited by VK2ZTB? No. But, isn't that an interesting SSB generator, using a polyphase network? Something very similar in the G3VA book. Might be the way to go for my next mobile HF rig.

Come on, Bill! Back to reality! Just think of all those lakes evaporating at two metres a year! (Hopefully much less in the winter, but there's no time to waste!) Zinc, remember! Will it be OK in contact with aluminium? And don't forget that editorial you have to write! One of these days you can write up the wind generator for AR, but not yet. And then, of course there's that article on the VK2ABQ beam. Harry, VK2OQ, sent in all that information in response to your invitation in June 1988. Combined with the 3ABP experiences it should have been done months ago! Sorry, Harry, it's still coming, but as you see there still isn't a lot of spare time! But with 3IY in the chair, the situation is improving.

Eventually I found the electropotential table in an encyclopaedia in the lounge. Zn and Al are adjacent, but there's still 900 mV between them. Zn of course plates well on to Fe (only 320 mV); so does Cd (40 mV). Maybe I should rush off and buy (?) some 22 gauge aluminium. But the zinc might be OK with a good coat of paint. In the meantime, haven't we found a lot of interesting things to think about? Serendipity? That's when you find something good while looking for something else; the ancient princes of Serendip were good at it. Serendip? Try Ceylon, Sri Lanka. 4S is the prefix...and what about that editorial that had to be written? It's done!

73.
Bill Rice VK3ABP
Executive Editor

Stolen Equipment

ICOM u2A two metre hand-held transceiver, Serial No. 2261. Stolen from Revesby Workers Club on 1 May 1989. Contact Owner, Fred Smith VK2DLE phone (02) 778206, Revesby police, or your local police.

Kenwood TR2600A hand-held two metre FM transceiver Serial No. 5060895, including rubber duckie antenna; Kenwood MS1 Mobile mount and Super Cheeta 27 MHz AM/SSB transceiver, Serial Numbers unknown. Stolen from car on evening of 30 May 1989. Contact owner Bob Allan VK5BJA.

WIA DIRECTORY

Federal Council

Kevin Olds	VK1OK	ACT Councillor
Peter Jeremy	VK2PJ	NSW Councillor
Peter Mill	VK3ZPP	Victorian Councillor
David Jerome	VK4YAN	Queensland Councillor
Bill Wardrop	VK5AWM	SA Councillor
Neil Penfold	VK6NE	WA Councillor
Joe Gelston	VK7JG	Tasmanian Councillor

VK1RH

Executive

Peter Gamble	VK3YRP	Federal President
Ron Henderson	VK1RH	Vice Chairman
Brenda Edmonds	VK3KT	Federal Education Officer
Bill Rice	VK3ABP	Editor Amateur Radio
George Brzostowski	VK1GB	Federal Executive
Kathy Gluyas	VK3XBA	Federal Treasurer
David Wardlaw	VK3ADW	Immediate Past Federal President

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Awards Mgr	Ken Gott	VK3AJU
Contest Mgr	Frank Beech	VK7BC
Education	Brenda Edmonds	VK3KT
EMC	Hans Ruckert	VK2AOU
Historian	John Edmonds	VK3AFU
Intruder Watch	Bill Horner	VK4MWZ
Int'l Travel Host Exch	Ash Nallawalla	VK3CIT
QSL Mgr (VK9, VKØ)	Neil Penfold	VK6NE
Standards & FTAC	Rob Milliken	VK1KRM
Tapes (Federal News)	Bill Roper	VK3ARZ
	Ron Fisher	VK3OM
Videotape	John Ingham	VK5KG
WICEN	Bill Wardrop	VK5AWM

Executive Office

Bill Roper	VK3ARZ	General Manager & Secretary
Ross Burstal	VK3CRB	Deputy General Manager
Peter Styles	VK3EBP	Administration
Ann McCurdy		Advertising & Administration
Helen Wageningen		Membership & Circulation
June Fox		Accounts & EDP
Earl Russell	VK3BER	EDP Consultant
Ron Fisher	VK3OM	Librarian

DIVISIONS

VK1

Address: ACT Division, GPO Box 600, Canberra ACT 2601

Officers		
President	Ted Pearce	VK1AOP
Secretary	Jan Burrell	VK1BR
Treasurer	Ken Ray	VK1KEN

Broadcasts: 3.570 MHz; 2m ch 6950; 70cm ch 8525; 2000 hrs Sun

Fees		
(City)	Full (F)	$44.00
	Assoc (A)	$44.00
(Country)	Full (C)	$44.00
	Assoc (T)	$44.00
	Pens. (G)	$33.00
	Stud. (S)	$31.00
	Family (X)	$25.00

VK2

Address: NSW Division, 109 Wigram St, Parramatta NSW 2124 (PO Box 1066 Parramatta), Phone (02) 689 2417

Officers		
President	Roger Henley	VK2ZIG
Secretary	Tim Mills	VK2ZTM
Treasurer	David Horstall	VK2KFU

Broadcasts: (R Denotes repeater) Times 1100 and 1915 on Sun; 1.845 MHz AM, 3.595 AM/SSB, 7.146 AM (1100 only); 28.320 SSB, 52 120 SSB 52.525 FM; 147.000 FM(R) 438.525 FM(R); 584.750 (ATV Sound) Relays also conducted via many repeaters throughout NSW.

Fees	
F	$41.50
A	$39.50
C	$41.50
T	$39.50
G	$34.50
S	$22.50
X	$24.50

VK3

Address: Victorian Division, 38 Taylor St, Ashburton Vic 3147, Phone (03) 259 9261

Officers		
President	Jim Linton	VK3PC
Secretary	Barry Wilton	VK3XV
Treasurer	Rob Halley	VK3XLZ

Broadcasts: 1.840 MHz AM, 3.615 SSB, 7.085 SSB, 147.250 FM(R) Mt Macedon; 147.225 FM(R) Mt Baw Baw; 146.800 FM(R) Mildura; 438.075 FM(R) Mt St Leonard 1030 hrs on Sun

Fees	
F	$50.00
A	$45.00
G	$36.00
S	$27.00
X	$27.00

VK4

Address: Queensland Division, GPO Box 639, Brisbane Qld 4001, Phone (07) 284 9075

Officers		
President	David Jones	VK4NLV
Secretary	John Aarsse	VK4QA
Treasurer	Eric Fittock	VK4NEF

Broadcasts: 3.605 MHz, 7.118, 14.342, 18.132, 21.175, 28.400, 52.525 regional 2m repeaters and 1296.100 0900 hrs Sunday. Repeated on 3.605 & 147.150 MHz, 1930 Mon

Fees	
F	$45.00
A	$45.00
C	$45.00
T	$45.00
G	$36.00
S	$27.00
X	$27.00

VK5

Address: South Australian Division, Thebarton Rd, West Theberton SA 5031 (GPO Box 1234, Adelaide SA 5001), Phone (08) 352 3428

Officers		
President	Don McDonald	VK5ADD
Secretary	Hans van der Zalm	VK5KHZ
Treasurer	Bill Wardrop	VK5AWM

Broadcasts: 3.550 MHz, 14.175, 28.470, 53.100, 147.000 FM(R) Adelaide; 146.700 FM(R) Mid North; 146.900 FM(R) South East; ATV Ch 34 579.00 Adelaide; ATV 444.250 Mid North; (NT)3.555, 146.500, 0900 hrs Sun

Fees	
F	$44.00
A	$44.00
C	$44.00
T	$44.00
G	$35.00
S	$26.00
X	$26.00

VK6

Address: West Australian Division, PO Box 10, West Perth WA 6005

Officers		
President	Alyn Maschette	VK6KWN
Secretary	Pending	
Treasurer	Bruce Hedland - Thomas	VK6OO

Broadcasts: 146.700 FM(R) Perth, at 0930 hrs Sun, relayed on 3.560 MHz, 7.075, 14.110, 14.175, 21.185, 28.485, 52.080, 438.525(R) Country relays 3.582, 147.350(R) Busselton 146.900(R) Mt William (Bunbury) Broadcast repeated on 3.560 at 1900 hrs.

Fees	
F	$42.00
A	$42.00
C	$42.00
T	$42.00
G	$35.00
S	$22.00
X	$23.00

VK7

Address: Tasmanian Division, PO Box 1010, Launceston TAS 7250

Officers		
President	Mike Wilson	VK7ZWW
Secretary	Bob Richards	VK7NRR
Treasurer	Peter King	VK7ZPK

Broadcasts: 146.700 MHz FM (VK7RHT) at 0930 hrs Sun relayed on 147.000 (VK7RAA), 146.750 (VK7RNW), 3.570, 7.090, 14.170, 52.100, 144.100 (Hobart) Repeated Tues 3.590 at 1930 hrs

Fees	
F	$42.00
A	$42.00
C	$42.00
T	$42.00
G	$38.00
S	$24.00
X	$22.00

VK8 (Northern Territory) is part of the VK5 Division and relays broadcasts from VK5 as shown (received on 14 or 28 MHz).
Note: all times are local. All frequencies MHz.

FEDERAL COUNCIL NEWS RELEASE

1990 MEMBERSHIP FEES

The Divisional Councillors and Executive of the WIA met in Melbourne over the weekend of 17th and 18th June 1989. The major item for consideration was the issue of the 1990 budget, and the level of member subscriptions.

The Delegates were mindful of the responses to the April Convention resolution which, if adopted by all Divisions, would have meant a uniform subscription of $70 per member.

An extensive examination of costing of all services was undertaken.

This effort to find further economies led to a recognition that the current level of services, and the current level of obligations being imposed upon the WIA, cannot be reduced.

It must be borne in mind that the WIA has a specific role to perform as the body representing radio amateurs in Australia. It must perform that role in an environment which requires well-informed and immediate responses to approaches from the Federal Government, Divisions and individual members. There is a need for a capacity to respond within acceptable time limits, and the days when volunteer reaction was tolerable, are gone.

In addition, the WIA has had to meet increasing requirements from the Corporate Affairs Commission, just like any other incorporated organisation.

This has meant that dependence on casual, even rostered, volunteers has ceased to be an option. Many of the tasks are beyond the capacity of casual helpers. The WIA has not been over-endowed with successful yuppies from the fast lane.

The people acting for the WIA on a day-to-day basis must be competent in a number of fields. There is a need for diplomacy; an understanding of how government works; competence in office management; familiarity with business practices; and skills in public relations. People no longer accept waiting a fortnight for an answer.

The stark facts are that -

(a) there are new workloads being imposed by outside agencies;
(b) more efficient responses are required from the WIA by government, members and industry;
(c) for the first time there has been a proper recognition of what must be done;
(d) for the first time there has been a proper analysis of c o s t - ing;
(e) we had become accustomed to thinking that we were getting proper sevices while remaining seriously under-funded in the past;
(f) we had not previously recognised what had to be done;
(g) we cannot continue to live in a fool's paradise;
(h) reserves are being depleted by a succession of past d e c i - sions to keep subscriptions to artificially low levels; and
(i) the WIA has to have its services performed by employees.

The fact is that our Executive office staff have been working inordinately long hours. The burden is really quite horrific.

For example, the Executive office receives an average of 70 items of correspondence each day. Sometimes this has risen to over 120 items in a day. In addition, there are the innumerable telephone enquiries. Someone has to respond!

Many come from members. Some of the enquiries require a considerable time for response. For instance, even telephone calls about reciprocal licensing with overseas countries; or about customs duties and by-laws applicable to items being brought from overseas, or on what should be done if complaints are made about RFI, are all legitimate enquiries. In a further category are the administrative matters raised by members, like changes of address, notifications of non-receipt of AR, and some which should even be addressed to DoTC. Yet telephone enquiries alone take up about one man-day per week!

In a related area is the task of keeping records consistent with what the DoTC has. Some of the problems are imposed on the WIA by defective information received, and by a need to ensure that DoTC data is meaningful, for example VK0 sometimes shows up as VKO; or VK1 is shown as VKI. Such errors seem to be of no significance to DoTC, but play havoc with our data base which also needs to identify licensed members by callsigns.

This is not a small task, and now includes many changes of callsigns as people up-grade, and one has to identify so-called new licensees with existing holders of former licences.

Then there is the need to service advertisers in AR. This requires someone to contact advertisers, check on copy of advertisements, chase up outstanding accounts. Apart from the commercial aspect of AR, there is the administration involved in the production and distribution of copies. Someone has to do the costing, to co-ordinate delivery of material to printers, to arrange for posting - even to decide on weight and cost of paper. Yes, someone has to do it - and to do so as well as possible.

We are now rapidly approaching the stage where examination devolvement will take place. Someone has to prepare for that task, and to do so with credibility.

However, a vital role is that of representing the interests of amateurs in Australia. This role benefits all amateurs, and it is unfortunate that so many choose not to recognise that, without some organisation resisting the pressure on our bands, we would not have much of a hobby any way.

It is futile and deceptive to say we are "just a hobby".

We may be a hobby, but we are using the resource of spectrum which potentially has a value worth mega-dollars to a government. There is little to stop governments allocating our spectrum to commercial interests. Business would love to have our bands above 2 metres. Political, propaganda agencies and public interest groups are always on the lookout for HF frequencies.

Where would all those who just want to enjoy their hobby, be then?

The cost of this representational role is really quite monumental. One cannot ignore the salary component related to work done in preparation of submissions to DoTC, the IARU and the preparatory work for WARC 92. It may not cost members directly, but one cannot forget the personal sacrifice of individuals who devote their time, often at loss of personal income, by attending meetings with various agencies, various WIA bodies, and in preparation of submissions.

The reality is that the hobby is surviving in an hostile environment. Here in Australia it is not a matter of personal freedom or national security, but it is in spite of domestic deficits, while invaluable spectrum is left out of reach of business, and out of government revenue raising.

Amateurs need more than just a magazine and a QSL facility!

In an effort to meet all these requirements, our staff have had to make great personal sacrifices. Sometimes this has led to health breakdowns. One cannot keep working over 80 hours a week in the office. At the moment, Bill Roper does just that, yet the WIA can only barely afford to pay him for 40 hours of work. The rest is done at personal sacrifice. Ross Burstal has also extended his work hours to significantly exceed his paid time.

Therefore, there is no doubt that there is a workload which is being met with inadequate resources.

These issue were examined, addressed and evaluated by the Councillors and Executive. With much concern for all our members, but bearing in mind that there are no immediate options, the delegates came to pass the following motion:-

This Convention affirms:

1. That the Executive component of the 1990 fees shall be $47, with an additional levy of $2 for international representation:

2. There will be a Concessional Rate available at a discount of 20% for the categories defined below:-
   a: Existing Pensioner members;
   b: Members in receipt of a full Pensioner Health Benefits Card;
   c: Needy members, whose financial circumstances are not better than those of persons eligible for a full pensioner benefit card, upon application to the relevant Division;
   d: Student members; and
   e: Family members, for second or subsequent members living at the same address. Family members do not receive AR.

3. That the 20% discount be split proportionally between Executive and Divisional Components, except that the discount applicable to members who do not receive AR shall be borne by the Executive.

In summary, the Executive does that which the Divisions tell it to do. The Divisions come to decisions by meeting as a Council. The services are selected by the Divisions. It is a total misnomer to suggest that "Federal", which is really a secretariat doing the Divisions' bidding, is "greedy" or that it acts like some form of governing body.

Those who hold such a view, fail to understand that the Executive is a group of individuals who are doing what the Divisions have charged it to do.

Having settled the question of the Federal fee component, the delegates then turned their attention to the question of a uniform fee for all Divisions.

It was acknowledged that a uniform subscription structure applicable to all Divisions is a desirable and practical necessity. However, it was also accepted that, because the different levels of services offered to their members by individual Divisions is done so at varying levels of cost, complete uniformity is something that can only be introduced over a period of time.

In addition it was recognised that the Divisional component of membership fees can only be set by the individual Divisions, not by the Federal Council. Taking these, and many other points into consideration, the Convention passed the following motion:-

This Convention recommends that, for the sake of uniformity between the Divisions, the Divisional component be set at $16.00.

The bottom line of all this means that the recommended membership subscription for the 1990 calendar year will be $65.00, but that some Divisions may actually set a slightly different fee.

A pie chart is shown to give members an idea of just what is involved in this recommended fee structure.

It goes without saying that the Council, Executive and Divisional Councils will continue to examine ways and means of minimising cost to members.

These are hard times, and hard bullets have to be bitten. The delegates have not shrunk from their responsibility upon being fully aware of just what are the risks, demands and costs.

While constructive suggestions are welcome, uninformed comment is not.

With adequate funding the WIA will be able more effectively to fight for the survival and advancement of amateur radio in Australia.

WIA NEWS

Bill Roper VK3ARZ, General Manager & Secretary

Michael Owen, VK3KI, NEW IARU Vice President

The Federal Council and Executive of the WIA is proud to announce that the member-societies of the International Amateur Radio Union (more commonly known as the IARU) have ratified the nomination of Michael Owen, VK3KI, to serve as their Vice President for a five year term.

The election was by unanimous vote of the 75 IARU member-societies who cast the ballots. Michael's election marks the first time that a radio amateur from outside North America has served as a Principal Officer of the IARU, and is therefore a great honour for the Wireless Institute of Australia, and all Australian radio amateurs.

Michael, who presently works and lives in London, England, has been actively involved in IARU affairs for 20 years. He was Federal President of the WIA for four years from 1969 to 1972 inclusive, served as a Director of the IARU Region 3 Association from its inception, and was a member of IARU President Noel Eaton's ad hoc WARC Advisory Committee in the years prior to the 1979 Conference.

At the 1978 Special Preparatory Meeting of the International Radio Consultative Committee (known as CCIR) and at the 1979 WARC, Michael was a member of the Australian delegation, by his nomination from the WIA as representing the Amateur and Amateur-Satellite Services. Michael also served as the Region 3 representative on the IARU Administrative Council between 1983 and 1986 and, in addition to VK3KI, is also licensed as G3ZML and ZL1BGY.

HAVE YOU ADVISED WIA EXECUTIVE OFFICE OF YOUR CHANGES FOR THE 1990 CALLBOOK?

Is the information in the current Call Book relating to your personal particulars correct? Now is a good time to correct your name, address and callsign for publication in the next Australian Amateur Radio Callbook. We also request that current repeater information be checked for accuracy by referring to the February 1989 edition of AR magazine. Please advise the Executive Office in writing at PO Box 300, Caulfield South, 3162, should you locate any errors.

The 1990 Australian Amateur Radio Callbook is scheduled to be published in September 1989 and, in addition to the most up-to-date listings of licensed Australian Amateur Radio stations, will also include the latest information on Australian Beacons, Repeaters, DXCC, and Bandplans.

The information in the Callbook is only as good and up-to-date as the information received from DOTC, and from WIA members. We need your assistance now to keep our records correct. Please advise the Executive Office as soon as possible if you require any amendments or additions to be made.

STOLEN EQUIPMENT REGISTER

The Stolen Equipment Register is one of many important services offered to members of the WIA. It has been in operation since 1984 and is now maintained on a computer database in the Executive Office.

At regular intervals, updates of the complete list, sorted into categories of:

. Equipment Manufacturer/Model;
. Owner; and
. Date Stolen

are distributed to each Division.

Members wanting to take advantage of this register, either to publicise the theft of their equipment, or to check equipment they are about to purchase, may contact their Division.

Any telephone reports of stolen equipment must be followed up immediately with written confirmation of the details to the Executive Office.

For maximum efficiency, these details should include:

* Manufacturer's name;
* Model;
* Type of Equipment;
* Serial number;
* Date stolen;
* Owner's name, address, and callsign;
* Distinguishing features or modifications to equipment; and
* Police contact (if any).

When equipment is recovered, it is important that you advise the Executive Office as soon as practicable to enable our records to be noted. Meanwhile, it is important to remember not to advertise your impending absence from your residence "on air". You never know who is listening. In a recent case a member inadvertently told all those on frequency that he was about to go out for the day. He came home to find a theft of considerable proportions had occurred. There are many stories on similar lines on record. BE WARNED!

BACKLOG OF TECHNICAL ARTICLES FOR PUBLICATION IN AMATEUR RADIO MAGAZINE

You could be one of the authors who has submitted an article to Amateur Radio magazine for possible publication, and are wondering when your article will be published.

For information there are presently 38 technical articles being processed by Amateur Radio's technical editors, most of them ready and awaiting publication in our magazine. Some of these articles have been outstanding for several months. Whilst this may seem an enviable position for the magazine to be in, the WIA understands that this is not necessarily a satisfactory one for the authors.

The Publications Committee is mindful of the delays occurring but they can assure you that our outstanding list is monitored in full on a monthly basis to keep track of all articles in our possession.

The editors usually do not publish two articles on the same or a similar topic in the one issue. Therefore, careful planning has to be given, not only to the topic but also to the size of the article.

The WIA is grateful to all those authors who have put so much work into preparing technical articles for consideration and ultimate publication in Amateur Radio magazine.

REDUCED PRICES FOR ADVERTISING IN AMATEUR RADIO MAGAZINE

In an endeavour to make advertising in Amateur Radio magazine more attractive to the small businessman, the Publications Committee decided to reduce some of the prices for the smaller advertisement space available in the magazine.

For instance, the 1/6th page advertisement has been competitively reduced in price to $90.00 per month for a 12 month contract.

The Business Card size advertisement is only $25.00 for members, or $45.00 for non-members. This represents excellent value for money for radio amateurs who desire to advertise their business and themselves in the form of a business card sized advertisement.

VICKI GRIFFIN, VK3BNK, NEW DRAFTSPERSON FOR AR

Recently, Amateur Radio magazine acquired the services of Vicki Griffin, VK3BNK, a qualified Graphic Designer who lives in Melbourne.

Each issue of your magazine has the need to have certain circuit diagrams and similar drawings effectively drafted to enable a professional presentation of particular articles. When this requirement arises Vicki ably assists us with her skills in the drafting field.

Vicki studied for her graphic communications degree with the Chisholm Institute of Technology from 1978 - 1981.

She passed her AOCP in 1977 at 18 years of age. Vicki comes from a radio active family. Not only is her husband a radio amateur, but her mother, father, two brothers and sister are all radio amateurs. Vicki says she is already working on her 17 months old son to qualify as soon as he is old enough!

We are very pleased to have Vicki as part of our team.

CAN YOUR CLUB BEAT 65% MEMBERSHIP WITH WIA

ALARA, which is the acronym for Australian Ladies' Amateur Radio Association, advised the WIA some time that membership figures showed, on a percentage basis, that WIA membership to non-WIA membership was around 65%.

As this figure is well above the national average, it occurred to us as reasonable to ask whether there are other Clubs affiliated with the WIA who can beat this figure. ALARA presently have 89 members in their association.

It will be interesting to receive feed-back as to whether there are other clubs with more than say 40 members who can beat the figure of 65%.

RECOGNITION OF AMATEUR RADIO

In June issue of Amateur Radio I advised of letters the WIA has received from senior members of the Federal Government which have acknowledged the important role of amateur radio in Australia.

I am also pleased to quote an extract from a letter received by Ken Ayers, VK4KD, the Queensland State Co-ordinator for WICEN, from the Queensland Government Minister for Emergency Services and Administrative Services.

".....I understand that through a long standing arrangement your members voluntarily man their own radio equipment assisting with communication in liaison with the State Emergency Service.

I take this opportunity to thank you and the WIA's members for their past efforts and look forward to a long and fruitful association, especially in times of disaster."

KEYLINK

As a number of members will know from first hand experience, several months ago the WIA set up a national telephone bulletin board, on a trial basis, using the Keylink system.

Unfortunately, this service was used by only a very small percentage of members of the WIA, and has therefore been cost inefficient.

Also, the work involved in maintaining current news information on the bulletin board has been more than the original volunteers were able to maintain.

When the question of the viability of maintaining the WIA Keylink bulletin board was discussed at the May Executive meeting, the Federal President, Peter Gamble, VK3YRP, commented that, since Amateur Radio magazine now had a much shorter lead time, the need to bring members up to date via Keylink was not so

pressing. He also pointed out that use by Clubs and Divisions was at a minimal level, and it had become obvious from the activity figures that this facility had lost the favour it originally had.

Executive then decided to discontinue the WIA Keylink facility for the time being, and the Keylink authorities were advised accordingly.

DEVOLVEMENT OF EXAMINATIONS

Brenda Edmonds, VK3KT, the Federal Education Co-Ordinator, recently received from the Department of Transport and Communications, draft copies of the NAOCP and AOCP Theory Question banks, together with the computer disk for generation of Morse Code exams.

The WIA has been given the opportunity to comment on this material before it is released for use.

A Working Party comprising of Brenda and Divisional representatives was convened for the weekend of June 24th and 25th, to look at the question banks, after which the comments from all Divisions will be collated and forwarded to DOTC.

CONTRA ADVERTISING

You may have noticed some new advertisements, aimed at attracting new members to the WIA, are now appearing in commercial electronics magazines such as SILICON CHIP, ELECTRONICS AUSTRALIA, and ELECTRONICS TODAY.

These advertisments have been taken out in exchange for those magazines placing an advertisement in Amateur Radio.

Our ads have been composed with several categories of people in mind who may be interested in the multi-faceted aspects of amateur radio, eg retirees, with time on their hands, CBers, or those interested in computers.

ANOTHER AMATEUR IN SPACE

According to the May, 1989 edition of QST, tentative approval for the Space Shuttle Amateur Radio Experiment (SAREX) has been received from NASA. An Amateur Radio station is now scheduled to fly aboard the Space Shuttle in March, 1990. Astronaut Ron Parise, WA4SIR, will operate the station using voice, video and packet communications from the orbiting shuttle. The orbit of the shuttle will allow amateurs located between approximately 46 degrees North and 46 degrees South latitudes to communicate directly with the shuttle. Further updates will be available later in the year.

CYCLE 22 NEWS

TNX Worldradio reports that the 11 year sunspot cycle is gearing up for a predicted peak in December 1989. Researchers predict it will be one of the most violent in 250 years.

According to researchers at the National Oceanic and Atmospheric Administration (NOAA), the intensity of sunspot activity is expected to increase between now and next December. NOAA believes the average number of solar flares (51.3 per month over a 13 month period) is greater than that observed in a similar period in 1957 (40.7), previously the strongest sunspot cycle ever recorded.

NOAA researchers predict that the present cycle will peak close to 200 sunspots per month. Massive magnetic storms on the sun, which have played havoc with radio communications and electric power transmission, are expected to continue throughout this period.

NZART ANNUAL CONFERENCE

Every second year, two members of the WIA attend the Annual Conference of the New Zealand Association of Radio Transmitters (the New Zealand equivalent of the WIA) as guests of the NZART. And, on alternative years, two members of the NZART attend the Federal Convention of the WIA as our guests.

The Federal President of the WIA, Peter Gamble, VK3YRP, and I attended the 1989 Annual Conference of the NZART in Masterton over the weekend of 3rd June to 4th June.

It was most interesting and informative to discover at first hand that, even though the structure of organised amateur radio in New Zealand is substantially different from Australia, the problems facing amateurs in that country are virtually identical to ours. The hospitality extended to Peter and myself by all of the New Zealanders we met was almost overwhelming. Considerable benefit to our respective organisations will result from this visit.

In addition to the Conference, I was fortunate enough to be able to attend a monthly meeting of one of the 83 radio clubs which are the Branches of the NZART. As in Australia, the clubs are where "grass roots" amateur radio is flourishing. I thoroughly enjoyed that evening with the members of the Waihi Amateur Radio Club.

Eye Glass Screen

A computer screen less than 12cm sq which fits on to an eye glass or headset should be available soon.

The image is said to have a picture quality and resolution equal to an ordinary personal computer monitor.

Name the Private Eye the United States innovation has its own focus knob. Applications include connecting it to a telephone modem so incoming messages can be instantly displayed.

It may even result in the development of a portable fax machine for those on the move.

An old amateur sat pounding a key,
"What a very slow business said, he,
If I had a good mike,
I could say what I like,
To my friends where-ere
they may be.

ar

Radiation Immunity in Domestic Equipment

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EMC -Reporter
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The following article, "Requirements to obtain Immunity in Domestic Electronic Equipment" was written by Dr Ing Blechert, DL9TJ, and appeared in the German amateur magazine CQ-DL of November 1988. It has been translated by VK2AOU.

The question, what limit value for passive immunity should be laid down for radio and TV receivers, occupied the experts for over 10 years and is still controversial. This question applies beyond receivers and is relevant to all kinds of electronic apparatus used in households.

The general operating approval of the Minister for Posts and Communications (May 1979) requires that all radio receivers (sound and TV) have to comply with certain technical specifications. These present valid regulations have been gazetted under No 478 document of the BPM (Postal Ministry) of 10 June 1981 (No 69, 1981) [1]. The relationship of these regulations covered by the document and the DIN-VDE 0872 Part 1-5 Norm is stated as it applied to radio and TV receivers at that time.

Insufficient passive immunity of electronic equipment to unwanted signals, which enter via attached cables, and which are not on the wanted signal channel, can usually be overcome by applying filters (depending on the case, single or combined use of high-pass, low-pass, braid breakers, ferrite chokes or effective screening of cables). The practical application is not discussed here in detail. It may be sufficient to mention that the procedure can be very difficult and costly.

Once manufacture is complete it is usually impossible to overcome the unwanted effects caused by direct radiation of electromagnetic fields on components and subassemblies The equipment remains unable to function properly in the existing electromagnetic environment.

The intensity of the effective electromagnetic field is the first matter to be considered, because "direct radiation" is the hardest immunity problem to be dealt with. Success can only be anticipated, if adequate immunity has already been provided during development and production.

The Deutscher Amateur Radio Club (DARC) expressed its opinion in 1978. During discussions and correspondence with the "FTZ" (Telecommunication Central Office of the West German post office) at the preliminary stage on the BPM regulation 478/1981, they stated that a field strength immunity of 15 volt/metre was desirable or at least 10 V/m as a compromise.

Initially the DARC could only base its stand on an official Canadian Government document, which stated that an interference level of 15V/m max. is to be expected in the range of 1.7 to 30 MHz [2].

The hon. technical officer of the DARC, Dipl Ing Gunter Schwarzbeck, DL1BU conducted his own investigations to confirm the requested limit values for radiation immunity. [2] Experiments were carried out by him in Spring 1978, measuring the field strength in the neighbourhood of typical antenna configurations. [3]. These examples are shown in Figs. 1 to 5. These results were later published elsewhere .[4].

It may be useful to make a few remarks as to why such measurements are actually necessary. It should be possible, following the work of J C Maxwell and H Hertz, to predict mathematically the existing field strength. Such predictions meet with insurmountable difficulties because the questions deal either with the field distribution in the near-field or perhaps in the intermediate field, but usually not in the far field of the source (transmitter antenna). The usual formulas are only valid for far field conditions, where the electromagnetic field E (electric field strength) and H (magnetic field strength) are perpendicular to each other with values depending on the transmitter power P and the distance to the transmitter antenna. The nearby surrounding conditions (the electrophysical properties of the ground under the antenna, buildings and the topography (etc) of the antenna have to be considered.

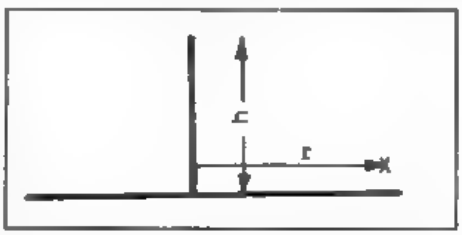

Fig. 1 Vertical antenna with 10 radials, buried 5 cm deep.

It is vividly demonstrated in [5], how the environment of the antenna determines the field strength and effectiveness of long distance communication.

Let us go back, after this departure, to Figs 1 to 5 and let us see what results the measurements have given and what follows as far as the requirements of radiation immunity are concerned. Fig 6 is a summary. Short wave amateur bands at 1.8, 3.5, 7 and 14 MHz are covered. Our time did not permit measurements at 21 and 28 MHz.

Wire antennas (inverted V-dipole and Beverage antennas) were used, and the field strength was measured nearby (Fig 2, a,b,c, and d) at selected positions, because the dimensions of these antennas were substantial, and other already available structures (eg tree, fence, house, roof or wall, balcony, flag pole) were around. Such radio amateur antennas and their consequent RF potential were in close proximity to electrical equipment used in these buildings This is basic to the nature of the amateur radio station, as specified by the international regulation re radio services and the treaty "Geneva Issue 1982", which is internationally respected (Chapter 1, Definition paragraph 1, Terms and Regulations No 53,54.) This treaty applies equally to other radio services (high power radio transmitters serving the public), and radio services are necessarily concentrated in densely populated areas. Thus the electronic appliances serving the public are subjected to disturbances in densely populated places with similar equipment distribution.

The field strength near the more compact antennas (vertical and Yagi antennas) was also measured at various points X and at distances r (Figs 1,3 and 4) Naturally these antennas have also to be installed in inhabited places. As a result values of r between 10 and 20 metres have to be considered typical distances to electronic equipment. In this situation, the usual 100W amateur transceiver, considered the minimal power necessary under present band conditions, can easily create or exceed 15 V/m, as can be seen by reference to Fig 6.

A transmitter power of 750 W (transmit-

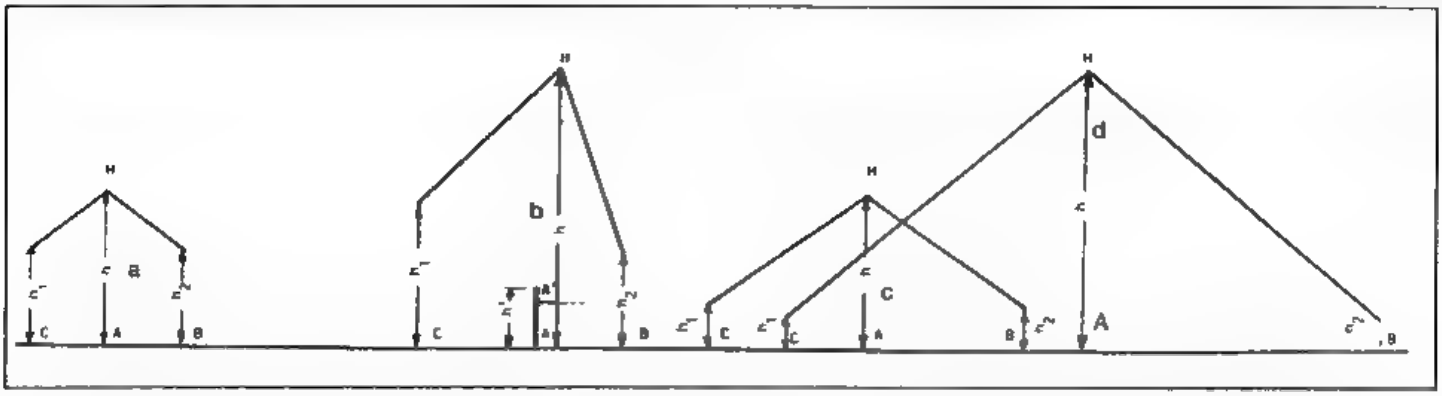

Fig. 2 Inverted V Dipoles, fed at H, used for various frequencies. a: 7 MHz b and c: 3.5 MHz; d: 1.8 MHz. In case b, Point 'A' is placed above the floor of a balcony at height h' of the parapet.

ter power of class B - West Germany - usually used) increases this field strength by a factor of √7.5, or about 2.7 times. If one considers that the possibly affected equipment is in buildings, which may be constructed of timber or steel re-inforced concrete etc causing an attenuation of only 6 dB average, then this effect does not markedly change the statement. Similar results, as found for 7 and 14 MHz, are also expected for 21 and 28 MHz, because the antennas are similar, and the intermediate field extends similarly to distances like 60m (for 21 MHz) and 40 m(for 28 MHz). The measurements carried out by DL1BU in 1978 are therefore a confirmation of the data published by the Canadian Government document.

At least two more publications have since appeared which support strongly the 15 V/m field strength values. Ing H Chichon, SP9ZD and Dr H Trzaska, SP6RT conducted field strength measurements in a different way at 14, 21 and 28 MHz, in the vicinity of a three element three band beam (trap type) HyGain TH3 MK3), which was installed 5 m above the roof top of a two storey building (case a). Measurements were further carried out with a multiband version (trap type Hy Gain 18 AVT) antenna and radials installed on the flat roof of a three story building, and a 2.5m high mast, transmitting on the 3.5, 7, 14, 21 and 28 MHz band (case b). They also investigated the field strength near a horizontal symmetrical dipole for 3.5 and 7 MHz (W3DZZ trap type), which was strung between a 10m high tree and a short mast on the roof top. Tests were also done with a 42 m long end fed wire antenna, installed between two adjacent 4 storey houses at the flat roof level, which resulted in the field strength of case d. The field strength near a 10 element long Yagi antenna (two-wave length boom) for 144 MHz, mounted 5 m above the flat roof of a 3 storey house is shown in the case e data.

The transmitter power in case a was 500 W, and the field strength inside the building usually did not exceed 2 V/m, but near the coaxial feedline and the transmitter cabinet 25 V/m resulted from inductively induced RF radiation. Such secondary effects together with some resonances are naturally to be expected with non-immune electronic equipment and their leads and have often been observed (eg speaker cables of Hi Fi systems). It has been observed that even weaker fields can cause undesirable effects.

250 V/m field strength was measured in "case b" also with 500 W above the roof near the feedpoint and radial system, which went down to 12 V/m max inside the building Similar induction effects, as in case a, showing up to 60 V/m at 3.5 MHz, were also observed. 5 V/m were found in case c (feeding with coaxial cable and balun) using 150 W transmitter power (-5.2 dB compared with case a and b).

The end fed antenna case d with 100 W transmitter power (-7 dB compared with case a and b) represented the worst case, causing 20 V/m field strength inside the building. Even higher field strength was observed in the vicinity of the feeder wires, which were supported parallel to the house wall.

In this case also, metal objects showed far more secondary re-radiation than in other cases. This type of aerial can therefore - as expected - not be recommended. In the VHF ranges 100 W transmitters may deliver 5 V/m max and usually not more than 2 V/m. But these values are not valid with regard to electronic equipment in neighbourhood buildings, because of the effect of the antenna directivity, and one has to expect 10dB field strength gain.

If one combines the results of [6], one sees that 15 V/m field strength is confirmed and has to be seriously considered.

Prof Dr T J Dvorak (Institute of Communication Technology, Swiss Technical University, Zurich) published an important paper in "Nachrichten Technisches Zeitschrift" about the continuously growing problem of electromagnetic compatibility. [7].

He gave figures for the expected field strength values to be obtained by the Amateur Service at a typical distance of 20 m. He quoted 8 V/m at 7 MHz, rising to 16 V/m at 30 MHz. Between 30 and 440 MHz, intensities greater than 60 V/m can be expected, due to higher antenna gain.

The following examples can be observed, if one looks at the 176 West German and West Berlin radio broadcast stations at July 1979 operating in the range of 155 to 21,680 kHz [8], 82 of which are found at long and medium waves, and 194 at short waves from 3960 to 21,680 kHz. Not all transmitters operate 24 hours per day, and not all frequencies are occupied during the year, because the short wave transmitter plans are matched in the months of February, May, September and November to the short

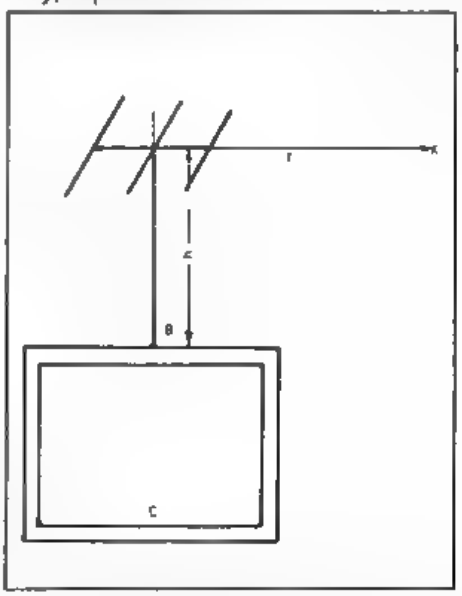

Fig. 3 Multi-band Vertical Antenna (eg GPA 5). Wooden ceiling and concrete enclosed roof space (Three Radials under the roof.

wave propagation conditions. This is unimportant with regard to the evaluation of radiation immunity of electronic equipment, because the apparatus should be fully usable at any time and day of the season. For video recorders in play-back mode, the frequency range up to 7.5 MHz is especially critical.

The signal level is very low and the amplitude diminishes only gradually from 5 to 6 MHz. Considerable spectrum components are still found beyond 10 MHz (example Fig 1 in [4]. There are 159 radio transmitter frequencies in this range, having individually up to 2000 kW of power.

It is therefore not surprising that VCRs could not be used, even at some distance from radio transmitters, because their radiation immunity was completely inadequate. The following example (1984) has become known: In the area of the town of Heusweiler near Saarbrucken (position of a 1200 kW broadcast transmitter working at 1422 kHz) it has become impossible to operate a VCR without corrective measures, and some VCRs could not be effectively made immune [8].

The transmitter used a directive antenna, which increased the effective radiation power to 5800 kW [9], and that meant, that the field strength at 1.6 km distance [4] was still 15 V/m. Even at 8 km distance the field strength dropped only to 3 V/m. Such conditions are quite possible at other locations (eg Berlin), and have been observed.

Some 330 VHF sound radio transmitters exist in addition to the long-, medium- and short wave stations mentioned. The power has most likely not been reduced in the meantime (in the FM range 87.5 to 102.5 MHz [8]. The further proliferation of private radio stations is likely to increase the number, and this is the reason why these transmitters move ever more closely to densely populated areas.

Measurements in band II, carried out recently in the Netherlands, showed what field strengths were generated in this frequency range over 1 to 45 km distance in suburban and country areas [10]. The data can be extrapolated, showing that VHF transmitters of quite common power can generate significant V/m field strengths over short distance (eg 500 m). This is in line with data in [7].

The picture can be rounded off with the fact, that in addition to the sound broadcast transmitters according to [8], already mentioned, 1065 TV transmitters in band IV and V have to be added [5] many of which use only low power (to fill in service areas - but quite a few use 100 kW of power (eg Hamburg -ZDF- on channel 30).

50 different spectrum users operated 1,411,359 transmitters on 31-12/1982, and more are expected in West Germany and

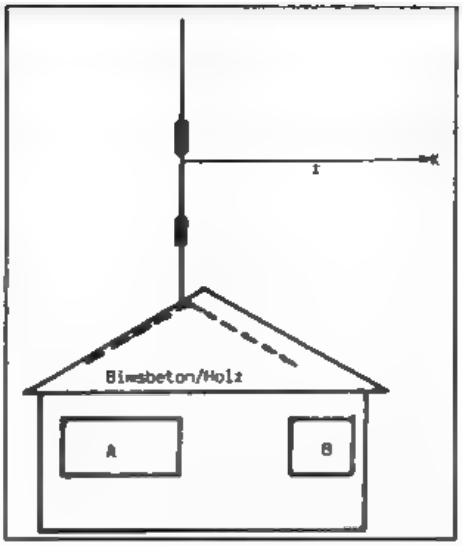

Fig. 4 Three element three band yagi a space completely surrounded by reinforced concrete of thickness 20 cm.

Berlin (West) [11]. Among these are the transmitters of the amateur radio service and ISM stations. Information [11] does not mention the power used or frequencies, and therefore the occurring field strengths are not known, but it is is to be expected that most are operated according to their use in populated areas and it is obvious that all these stations have a great potential for creating disturbances.

The future of wireless communication was discussed in a paper by the magazine for "Post and Telecommunication" (ZPF) in April 1988. We can expect that the upper UHF range will be very much needed by the mobile (D-Net) service during the next year [12]. At the end of 1990 one expects, according to assumptions, that 10 million users will telephone via 5000 stationary radio stations and about 500 relay stations. One expects 2 million participants for this radio service. We can therefore expect that this electro-magnetic spectrum will also be radiated in populated areas. This radiation expands to even higher frequencies, and the required immunity levels cannot be reliably stated. This question will be dealt with in a later paper at the appropriate time, as far as amateur radio service is concerned. The development shown of the ever-intensified use of electronics and the naturally occurring consequences have been foreseen for many years by the interested observer. Industry appeared not to appreciate the unavoidable necessity when (10 years ago) the DARC resolved to determine the correct and adequate radiation immunity level for broadcast and TV receivers, as far as the Telecommunication Law (FAG) and the authorities are concerned.

Even the German Post Office did not foresee the possibility, according to the author's knowledge, to request more than about 3 V/m (more precisely 3.16 V/m equal to 130 dB (uV/m) radiation immunity for the frequency range of 0.15 to 150 MHz (with exception of even lower field strength values for selected frequency bands), and adopt these for the regulation no 478/1981. The recommendation to adopt 15 V/m, as proposed by the DARC representative during discussions, has been dropped later by the German Post Office on legal grounds. Therefore one was still 13.5 dB below the compromise found to be necessary by the DARC and also 10dB below the 10V/m value considered healthy and (as we have seen) still valid.

The German Standards (Norm), which contain basically the same material, were eventually adopted after "tough wrestling" at the German Electrotechnical Commission DIN and VDE (DKE). They came into force only years later in March 1984 (DIN VDE 0872 Part 6), Radio Interference Counter Measures of Sound, Radio and TV Receivers, Radiation Immunity Requirements.

An additional paper will report about the modern world-wide development, and especially in connection with the political aims of the European Community and the so-called Common Market, which is being developed step-by-step and is to be finalised at the end of 1992 We can already say, that a substantial reduction of the consumer protection gained so far has to be feared.

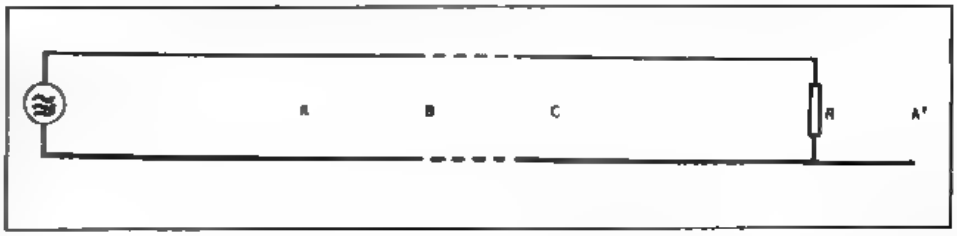

Fig.5 Beverage antenna (200 m long about 3 m above ground, terminated with R = 600 Ohms). The distance from the fed end to points A, B and C were 50, 100 and 150 m respectively.

Amateur Band	Antenna Configuration as shown in Figs 1-5	Transmitter Power (W)	Electric Field Strength (V/m) at the Points shown in Figs 1-5 Point A	Point B	Point C	Point A'	Point X(r)
1	2	3	4	5	6	7	8
1.8 MHz	Inverted V Dipole Fig 2d: h = 29m. h_1 = h_2 = 3.5m. Antenna length = 2x40m	1 50 75	10 2 3	38 67 82	(30) (67) (82)		Note: Values in brackets were not measured or calculated, but are probably correct due to symmetry.
3.5 MHz	Inverted V Dipole Fig 2b: h = 29 m, h_1 = 15m. h_2 = 10, h' = 6 m. Antenna length = 2x20m	400 100 750	4 2 6	36 18 49	20 10 27	30 15 41	* At a distance of 20 m from Point A, a value of 6 V/m was measured, in addition. The calculated values for this point were 3 V/m and about 8V/m for 100 and 750 W respectively
	Inverted V Dipole Fig 2c: h = 16 m, h_1 = h_2 = 4 5 m. Antenna length = 2x20 m.	400 100 750	24 12 33	180 90 247	180 90 247		** In the case of the timber ceiling, the value at point C is estimated to be 10-15 V/m.
	Beverage Antenna, Fig 5: (200m long, about 3m above ground). Measured directly under antenna 1.5m above ground.	400 100 750	90 45 33	50 25 69	30 15 41	3 2 4	
7 MHz	Inverted V Dipole Fig 2a: h_2 = 18m m, = h_1 = h_2 = 10m, h' = 6m, Antenna length-2x10m	400 100 750	20* 10* 27*	38 15 41	(30) (15) (41)		
	Vertical Antenna with Radials, Fig 1 h = 10m Measurements made 1 5m above ground at Point X, r metres distant.	400 100 750					72 (2 m), 40 (4 m), 30 (8 m), 18 (16 m) 36 (2 m), 20 (4 m), 15 (8 m) 9 (16 m) 99 (2 m), 55 (4 m), 41 (8 m), 25 (16 m)
14 MHz	Multiband Ground-plane Antenna (trap type) with individual radials in roof space.	400 100 750	18 5 14	7 4 10			15 (20 m), 6 (40 m) 8 (20 m), 3 (40 m) 21 (20 m), 8 (40 m)
	Three-Band, Three-element Yagi Antenna (trap type), Fig 4' h = 10m. Reinforced concrete building.	400 100 750		18 9 25	1** 0.5 1.4		4 (20 m), 2 (40 m) 2 (20 m), 1 (40 m) 6 (20 m), 3 (40 m)

Fig. 6 Overview of the Field Strength Measurements according to refs 3 & 4 (table translation given.)

Author's Footnotes

1) A receiver (eg Sound or TV) with sufficiently good shielding would in the ideal case, only accept electromagnetic energy through the antenna input. Ideally, it should only respond with channel selection, to signals that fall into the channel being used. Instruments other than radio receivers, with sufficiently good shielding, should not respond at all to electromagnetic energy which acts from outside.

2) For a definition of the regions Near Field, Intermediate Field and Far Field, we point to the relevant literature on antennas, eg the standard work of J D Kraus, Antennas, McGraw Hill Book Company. In the Near Field the distance is less than one tenth of a wavelength; this extends to four wavelengths for the Intermediate Field, where the Field Strength Vector has measurable radial components. It is only in the Far Field that the Field Strength is inversely proportional to distance.

3) The so-called WARC bands 10.1 to 10.15 MHz, 18.068 to 18.168 and 24.89 to 24.99 MHz were allotted to the Amateur Radio Service in the World-wide Radio Administration Conference of March 1979 and were not considered in these investigations.

4) The Far Field begins with the given sending frequency about 850 m distance to the sending antenna, so that simplifying assumptions can be made.

5) With the exception of low power transmitters in the 47-68 MHz band, all other transmitters are in the frequency range above 174 MHz.

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A Simple Logic Probe

Mike Groth VK4CDG
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A logic probe is a helpful device for trouble-shooting digital circuitry, which shows the logic state of a circuit point, or the presence of digital pulses. This very simple probe is suitable for medium speed TTL and CMOS devices operating from 5 to 15V power supplies. It will display single pulses down 200 µs and clock frequencies to 100 kHz. Shorter pulses and higher frequencies could be handled by a more sophisticated probe, but the extra components could not be fitted in the space available.

The probe is powered from the circuit being tested, via a twisted cable fitted with a pair of crocodile clips. If the clips have been connected correctly to the supply rails, the yellow LED will light, indicating the probe is ready for use.

The logic states are displayed by a red and green LED.

Both LEDs off	Probe tip not contacting circuit, OR Gate stuck between states.
Red LED only	HIGH state.
Green LED only	LOW state.
Red and Green LEDs	Pulse train greater than 5 Hz.

The circuit (Figure 1) is designed around the LM339 quad comparator. The HIGH state corresponds to an input voltage above 3/4 of the supply voltage, and the LOW state corresponds to an input voltage below 1/4 of the supply voltage. The probe is biased to half the supply voltage, so neither logic LED will light unless the probe is in contact with a logic gate. The diode and capacitor between the input and output comparators, stretch short pulses to a visible duration.

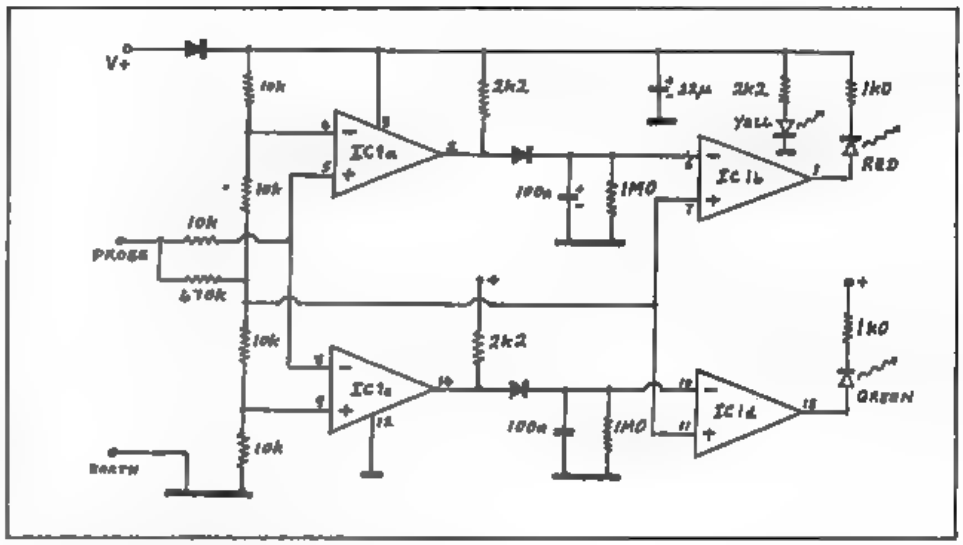

Figure 1 Circuit of Logic Probe

The general construction of the probe can be seen from the photographs. The circuit was constructed on both sides of a piece of vero-board, mounted in the barrel of a 10ml plastic syringe, with the LEDs viewed through the transparent wall. The input lead is a fine solid core wire passing through the bore of the needle. When the needle was cut to length with a pair of pliers, the cutting action crimped the wire to the needle, which forms the probe tip.

The electronics were secured in the syringe barrel by using the rubber cap from the plunger as a stopper, with the power cable passing through a small hole drilled in it. The space above the cap was filled with a neutral cure silicone sealant, which anchors the cable and seals the unit. The finger lugs at the top of the syringe were cut off with a pair of shears and the stumps filed smooth. ar

Figure 2 An internal view of the probe

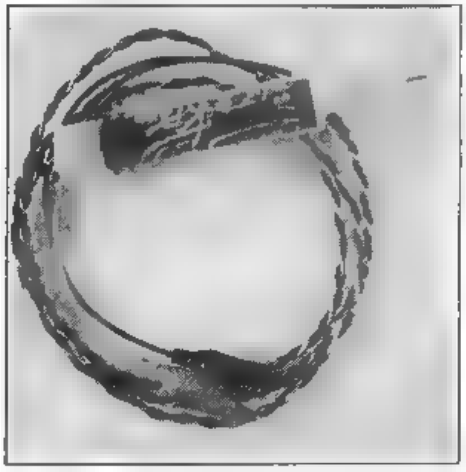

Figure 3 The completed probe

Installation Tips For Two-Metre Mobile

Gil Griffith VK3CQ
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Bright 3741

If you intend to use a repeater, spare a thought for those who are monitoring it.

Recently I and many other amateurs spent a fun afternoon listening to engine noises on the local repeater. The repeater timed-out regularly over a period of about two and a half hours.

I thought at the time that the expected influx of new operators on two metres might cause much more of this type of embarrassment, hence this article.

If you intend to use a repeater, have a thought for those who are monitoring it. Many amateurs keep their transceivers on 24 hours a day to listen for emergency traffic. They cannot be expected to answer all calls - or even any of them if they are busy - but reckless use of the repeater can cause them to switch off altogether. (My pet gripe is people who drop carriers, often many times, without identifying themselves). As I monitor two repeaters during the day, and one all night, it can get very tiring, especially at bedtime or later, when one is woken by a couple of very annoying "kerchunks". Not only is this practice selfish, it is illegal.

Anyway, on this occasion, it is probable that someone's microphone had become jammed beside the car seat and the PTT had caused the transmitter to turn on, unbeknown to the operator. (I hope they don't have to buy new finals!).

Figure 1 shows a single timer that can be fitted to almost any transceiver to prevent the above type of embarrassments. The original version was found in an old police radio, and was set up for a 50-second delay. If you experiment with the resistance value it is possible to set whatever delay you like. I suggest a 5.6 M ohm resistor, which will give about two minutes 40 seconds before the transmitter shuts down. With this value you will never time-out the repeater again! I expect you could use a switching transistor in place of the relay, in which case the whole circuit would cost only a dollar or two. It would even be smaller, too.

Many amateurs install their transceivers

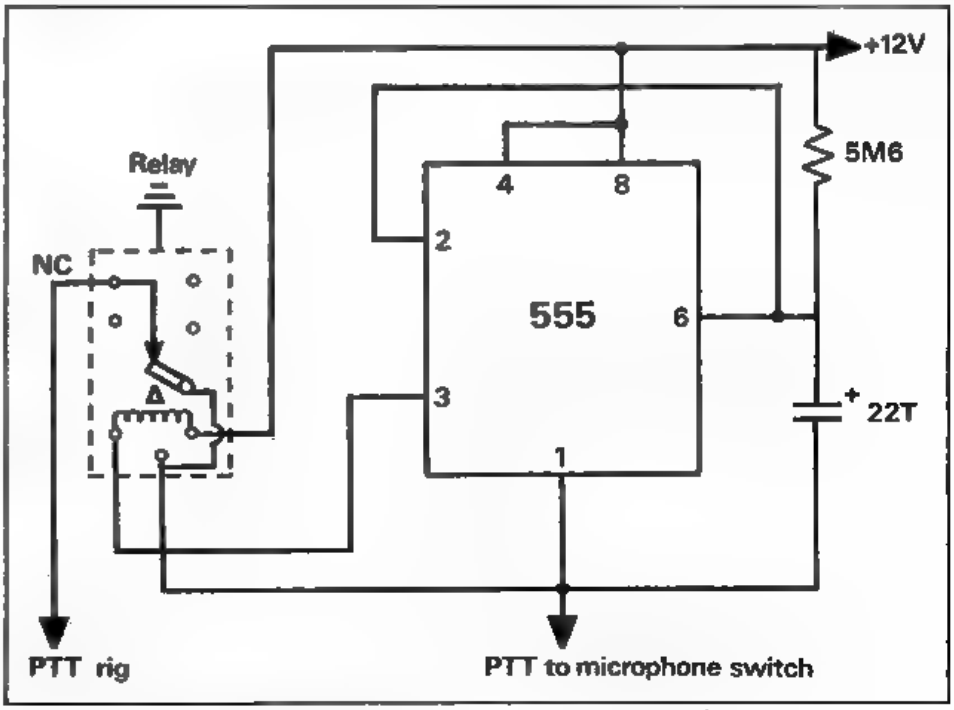


Figure 1: Transmitter Timer 1820k ohms = 51 seconds 6M6 = 3 minutes 10 seconds 5M6 = 2 minutes 40 seconds

with the power leads connected directly to the car battery terminals. This may have been necessary with high power or valve units in order to keep the voltage as high as possible, but the average 10-to-25-watt modern FM transceiver draws little current, so it is preferable to use the accessory supply. This means that, if you leave the vehicle, the unit is switched off with the ignition switch. You can still operate stationary with the engine off and the key turned to ACC and, as an added bonus, the unit will be temporarily disconnected when starting the engine - although this depends on the car. If you want to run a high-power linear you can connect that to the battery terminals, if necessary, and run the transceiver from the ACC switch.

When installing your unit in the car, put it where you can see the display and hear the speaker, and also reach the controls comfortably. Then, if for any reason it starts transmitting, you will have visual warning. When making installations, it is a good idea to discourage thieves in every way possible. If you just have it sitting on the seat, you can be assured that it will disappear very quickly. The more difficult it is to install the longer it will take to remove. This could mean the difference between keeping or losing your expensive equipment. As a further deterrent, it is wise to engrave your name on the equipment. Stickers advising of this marking, or a sticker saying "This is not CB" are a good idea. Ensure you install a microphone clip - and use it. If you are fortunate enough to have a new car, you can try fitting the transceiver in the ashtray space or elsewhere behind the dashboard if there are holes available. The glove box is not recommended.

Hand-held transceivers can be used while mobile by a passenger, although their audio output is usually inadequate in a noisy car. I have a mount just above the upper seat-belt bolt, right beside my ear, which holds the belt-clip firmly. An external antenna plug and power lead are connected, and a hand-mic will be one day. You can also permanently fit a small linear and plug your hand-held into it when required. This will give more realistic power output and can be mounted out of sight.

Mobile antenna systems are whatever you require; anything from a fixed mount in the centre of the roof, which is best, to a magnetic base or gutter mount etc. Dozens of types of whip antennas are available or you can make your own out of old CB whips cut down to 19 inches and covered with braid and heatshrink tubing. Even a piece of wire joined to the coaxial cable and potted in epoxy will work. You can then glue it to an old speaker magnet for a really cheap mount.

For driving in mountainous areas, it has been found by experience that a quarter-wave groundplane antenna works better on repeaters than a five-eighth antenna. This may be because the repeaters tend to be on the hilltops and the radiation angle is higher for the quarterwave whip, but could also be because the longer whips tend to bend over at speed and distort the radiation pattern.

The opportunities are endless, especially if you are willing to experiment with items from the junk box.

For more information on two metres for the newcomer, see Ron Cook's excellent article in July AR, page 5.

Remember to check up on the road rules of your state, as in many it is an offence to transmit whilst driving. ar

An Antenna Mount for Poles

Colin MacKinnon VK2DYM
52-54 Mills Road
Glenhaven 2154

A mount was needed to support an antenna and rotator on top of a telephone pole, as shown in Figure 1. The resulting unit and the method of erection could well be useful to other amateurs. A telephone pole can be a good alternative to metal towers, and doesn't require guy wires.

The mount design that evolved is light weight, simple, and allows the rotator to be removed easily, whilst the antenna stays in position. It also allows a longer mast to be used. It was decided to use a commercial thrust bearing to take the side loads of the mast and to ease the stress on the rotator, but a plastic thrust bearing will do as well.

The mount is made from 25mm angle iron, and 6mm steel plate. See Figure 2. It consists of two side rails of angle iron spaced about 100mm apart, to which are welded 3 cross pieces. In turn, each cross piece has a 6mm thick plate welded to it. The plates are drilled for the rotator and thrust bearing bolts. As well, large clearance holes are provided so that the mast can slide up through the plates, an advantage for long masts. Only basic sizes have been shown as each installation and rotator system will require different dimensions.

If you have a heavy antenna system, the rotator plate may need to be braced as shown on the drawing. If instead, the thrust bearing at the top is to take the vertical load, the top plate needs to be braced as shown in the photos, using 6mm diameter rods welded from the plate to the rails.

A further 3 cross pieces of angle were made up to clamp the mount to the pole, using long bolts, or threaded rods. A few extra small holes were drilled to allow attachment of wire antenna fittings etc.

It is very important that all three plates are in line. To ensure the alignment, 3 plastic bushes were made to fit in the centre holes of the plates, with an inside diameter to take the mast snugly. The mast was assembled through the plates and supported above and parallel to the rails. Everything was securely clamped in position and then the plates were tack welded to the rails, and later fully welded.

The rotator can be unclamped and removed if needed, because the middle plate with its plastic bush prevents the mast and antenna from swinging sideways. The plastic bush was machined out to have about 2mm clearance so that there is no chance of binding against the mast.

Notice that the 3 cross pieces extend beyond the rails on one side and have holes drilled to take U-clamps. This allows a gin pole to be clamped to the mount and makes it easier to lift and position the antenna etc.

The cost to manufacture the mount will depend on your workshop facilities and whether you use the local welding/machine shop. Our unit was a "Foreign Order", so no costs are available.

Once the mount was complete, had been tested and cleaned of weld splatter, it was galvanised at a cost of about $50.

An assembly procedure was worked out

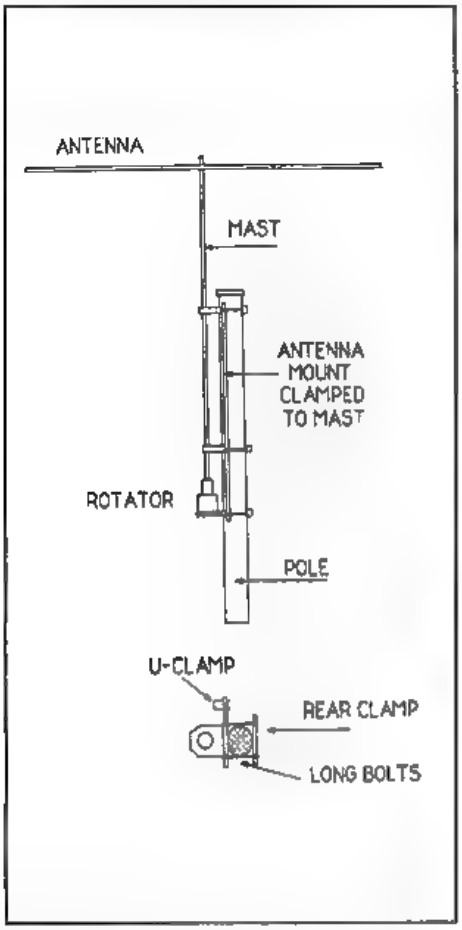


Figure 1 diagram of completed installation

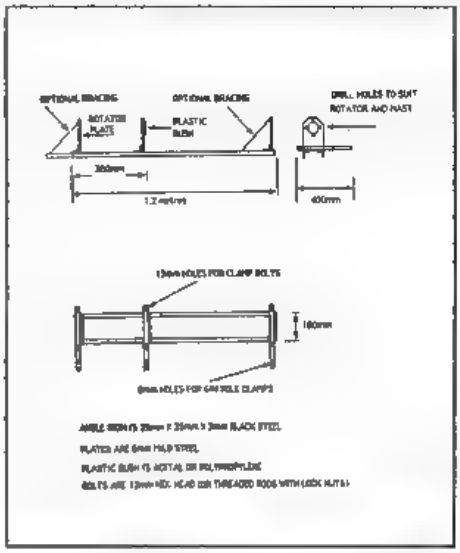
so that the antenna system could be lifted and installed safely and with minimum effort. It requires one person at the top of the pole and one on the ground to pull the gin pole rope.

Note:

Trial assemble everything on the ground first to make sure it's all there, and all fits!

The installation procedure is as follows :-

1 Bolt the thrust bearing to the top plate.
2 Lift the mount to the top of the pole and clamp it into position. As most poles are not a constant diameter, some judicious axework and/or hardwood packing pieces may be needed to ensure the mount rails are truly vertical. The mount has little torsional rigidity, so make sure not to twist or distort it.
3 Lift a gin pole to the top and clamp it to the mount.
4 Lift the mast to the top and slide it into the thrust bearing, but only extend it sufficient to fit the antenna boom clamp. Clamp it securely in position. It may help to fit a muffler clamp around the mast to stop it slipping down inadvertently.
6 Lift the antenna using the gin pole, and attach it to the mast.
7 Connect and secure the co-ax etc.
8 Release the mast clamping, and raise the mast to its full height.
9 Lift the rotator and bolt it in position.
10 Clamp the mast to the rotator after making sure the antenna is pointing in the desired direction relative to the rotator.
11 Attach the rotator control cables, water proof and secure the installation. The details of correct antenna installations have been described by others in previous AR technical articles.



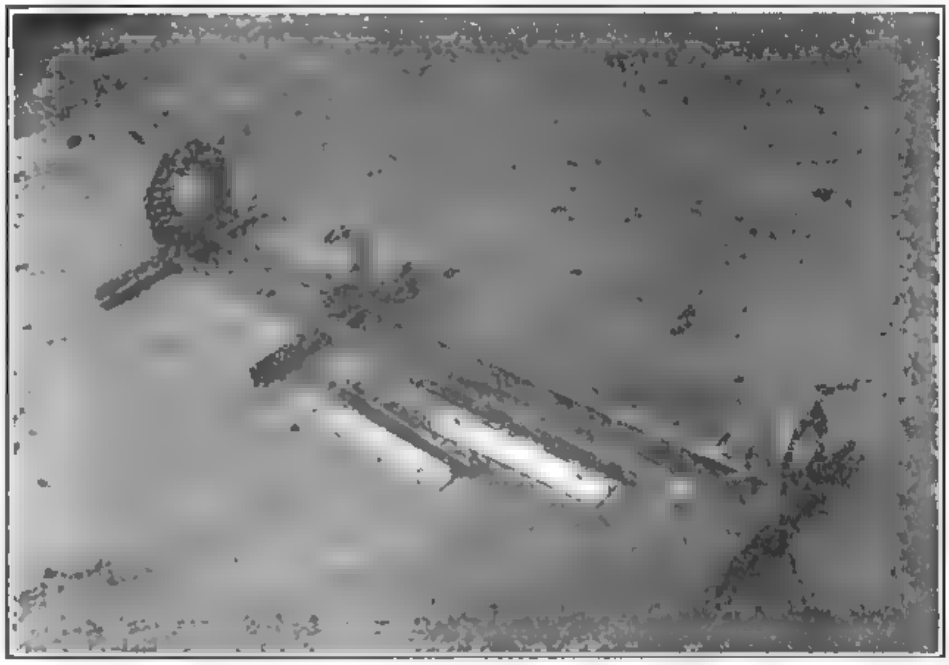


Photo 1. Basic antenna mount and the three clamping pieces. All three plates are bored out so a long mast can slide up through the middle

350 Tasmanian Devils!

Lewis Smith VK2LS
30 Cunning Street,
Port Macquarie 2444

On April 18, Lewis VK2LS logged his 350th individual Tasmanian station for the Tasmania Devil Award: this is a record for any Amateur Radio station outside of Tasmania.

The net for this Award is run by Bob VK7NBF Falmouth, Tasmania each Tuesday night at 1000 hrs UTC on 3.590 MHz.

Since commencing in 1980, Bob has issued 443 individual Awards; 198 of these being to overseas countries, including England, America and New Zealand. Come along to the net and enjoy the freshness of the Apple Isle company.

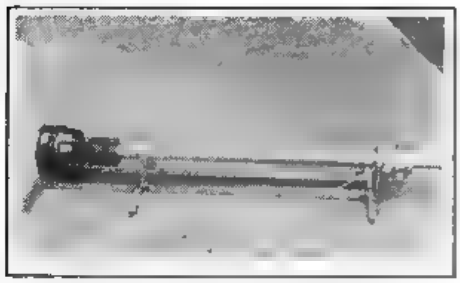


Photo 2 Mount with thrust bearing, rotator and mast assembled. Note the braces added to the top plate to take the vertical load of the mast.

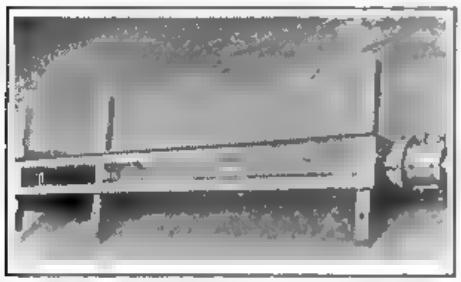


Photo 3 Rear view of the mount. The angle rails "bite" into the pole to hold the mount securely. Note the extra length of the brackets on one side and the holes to clamp a gin pole.

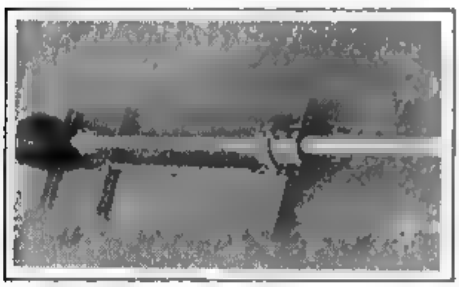


Photo 4. Note that the mast passes through a plastic bearing in the middle support plate. There is about 2mm clearance between mast and bearing. (A spare bearing is shown next to the mount)

Photo 5. This view shows how the rotator plate is welded to the lower bracket It is a simple matter to undo the rotator screws and mast clamp and then remove the rotator if needed.

From The International Police Association Journal (IPAGRAM)

Contributed by

Dean Probert VK5LB

C/- PO Mt Compass 5210
To: All policemen and any HAM friends who are policemen.

We are very pleased to advise you that our Japanese branch of IPA & IPARC has just located in Japan.

Hereby we were officially admitted to join by the IPA Head Office in January 1987.

Our current branch is being managed by 19 policemen who are interested in the radio communication as a HAM.

For Japan is the country where its surroundings are all sea, and consists of four major islands, being quite different from other countries in Europe.

Japan had not been good at going about in company with any foreign countries openly for a long time in every ways.

And no differences are still existing here even now. So we, all members of Japan branch, desire to make contacts and communicate with the policemen in the world through activities of IPA. We would never hesitate to help you support as possible and also be very glad if you accept our cordial services for you with no charge when you, or your family, or your friends have a chance to come over to Japan.

For those purposes to be better as possible, kindly please be sure to understand and recognising the following.

1 We are not in the position to have any relationship to the prior Japanese Branch which was existing before January 1987.

2. We are the only Japanese Branch that was admitted by IPA Head Office.

3. If you want to get in touch with us, the Japanese Branch, please address as "Secretary-General"

4. You are required to correspond us in "Japanese or English" Since only few staff can understand English perfectly here at our branch, and just as this letter you are reading has been translated by an interpreter, you have to write your English correspondence clearly in block letters. (Typewriting will be much appreciated).

Then your English letter will also be translated into Japanese for us.

But please don't worry about our English-Japanese translations, because we were able to deal with your daily English conversation when you are here in Japan. So you are very welcome whenever you want.

Kindly please advise us the name of your hotel you stay, room number and your itinerary in Japan prior to your visit.

5. Meanwhile, you are also very welcome to spend less than two nights or so at my house if you want.

Japan has own unique culture, which is quite different from the one in America or in Europe. We hope you will admire our wonderful history facing and touching our traditions or arts.

Tasting and enjoying our "real Japan" will excitingly be great fun for you and we are looking forward to your letters.

Name and address for your letters.
IPA & IPARC
RC Japan Section
Secretary-General
2653, Suarashi,
Sagamikomachi, Tsukui-Gun,
Kanagara-Ken 199-01
Japan
Name Michinori Jimbo
Phone: Ø4268-51324 or 04268-52010
Sincerely yours
IPA & IPARC

Japan Section - Michinori Jimbo
Secretary-General
Radio Club Japan
Section Membership
Member Ham Radio Call
JR1SSH - Michinori Shiratori
Saitama Police Department
JE1TTI - Michinori Jimbo
Kanagawa Police Department
JF1JCS - Kenji Hayashi
Saitama Police Department
JJ1HCB - Kichisuke Ogata
Saitama Police Department
JA2IPI - Fumio Minami
Mie Police Department
JA2APA - Kazumi Kitade
Mie Police Department OB
JA2DOH - Norio Matsuda
Shizuoka Police Department
JA2KSA - Yoshitake Yabune
Mie Police Department
JR2FKB - Masaji Suzuki
Aichi Police Department
JR22MZ - Hideki Yasuda
Mie Police Department
JG3GYU - Tetsuro Ito
Shizuoka Police Department
JA3BAW - Kazuyuki Taguchi
Hyogo Police Department
JR3UHK - Takeshi Shimamura
Wakayama Police Department
JA6LRB - Kazuhisa Nagashi
Nagasaki Police Department
JA7MQM - Satoshi Suto
Aomori Police Department
JA8ATU - Norihiko Tanimura
Hokkaido Police Department
JH8MKQ - Kazuo Natori
Hokkaido Police Department
JA9JDX - Yasuyuki Ishiguro
Toyama Police Department

Houseboat on Six

Richard Cortis VK2XRC
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CLOVELLY 2031

We hear from time to time,and read considerable amounts about major DX expeditions, and we hear of the many thousands of contacts that these professionally organized expeditions make. However, there are many hundreds of family expeditions which take place, where one member of the family attempts to make occasional contact on amateur radio. This article attempts to report some of the background to one of these light family-orientated expeditions.

Early in 1988, my family and I booked a houseboat holiday on the Murray River. The intention was to travel by rented houseboat from Renmark in South Australia upstream along the Murray River to Wentworth in New South Wales, at the junction of the Murray River and the Darling River. After some discussion and correspondence, the family rented "Liba Liba 4"; it was 54 feet long and approximately 22 feet wide, and was powered by a 173 Holden motor driving a pair of paddle wheels through a tractor gearbox and differential. The vessel had a top speed of five knots. The average current in the river was approximately half a knot against us. After some experimentation, we determined that the most economical travelling speed was a bit over four knots, giving us an effective over the bottom speed of approximately 3.7 knots. On this basis, we could expect to motor approximately 4.5 hours per day.

The available time of four and a half hours per day of motoring offered the most magnificent opportunity to operate six metres at the high point of the six-metre DX season.

Accordingly, in preparation for the trip, I packed my FT690R, together with a small power amplifier and a number of bits and pieces. Upon arrival at Jane Eliza landing in Renmark, we moved aboard "Liba Liba 4" and stowed all our various belongings, food and drink etc. A two-metre 5/8 antenna was installed in an appropriate position on the steel support frame for the canvas foredeck awning. With some very minor trimming, this performed very well as a quarter wave on six metres. The radio and power amplifier sat on the end of the bunk behind the steering position, and a power lead was led through the boat to the house-lighting battery near the engine at the rear of the vessel. There was a separate starting battery to guard against overuse of the linear after dark.

The arrangement for the antenna, and the power supply as set out above, appears to be somewhat simple. However, there are many criteria to be met in the preparatory arrangements. First of all, my wife has to find room for the equipment in the car on the way. This is always a problem, as we have three large-size teenage children, together with ghetto blasters and associated equipment, which must take precedence over amateur radio. Experience operating maritime mobile in a number of Sydney-to-Hobart yacht races led to a minimization of basic equipment. In a small plastic toolbox, I packed a fairly long length of coax on a base, together with a PL259 plug. Also included was a roll of heavy (12-volt) cable, pliers, wire cutters, screwdriver, Phillips head screwdriver and a scope soldering iron with 10-metre leads and alligator clips, so it could be used directly from the 12-volt battery. In this mode, the scope soldering iron works well, providing satisfactory operation for the user. However, one must be prepared to replace the carbon elements on a regular basis. I have been unable to determine a more satisfactory soldering iron for use in similar situations. However, one must be careful to ensure that one disconnects the power before soldering certain items, as several volts of potential difference may exist between the tip and various components.

Having managed to satisfactorily cool the beer and amuse the teenagers, I finally managed to get my station on the air.

I make no pretensions whatsoever about the capability of my station. I was operating effectively a quarter-wave vertical antenna in an otherwise horizontally polarized environment. For the purists, I considered the alternatives: I could have operated a six-metre halo antenna, which would have provided horizontal polarization and roughly omni-directional properties. However, the family would not allow it in the car. In case others should suggest it, I also considered operating a three-element Yagi. However, the directional stability of the vessel, together with the serpentine route of the river, made this somewhat impractical. I had to steer the vessel and operate amateur radio at the same time. The rest of the family stayed in bed or were sunbaking.

Despite the crude nature of my antenna system, and the low (30 watts) power I was operating, I managed to log approximately 40 stations during our 10-day trip. This may not seem to you to be a great number; however, I am a rag chewer by nature. My wife says I talk a lot. Stations worked included some in Albany, Tennant Creek, New Zealand, South Australia, Tasmania, Queensland, New South Wales and Victoria. I heard, but did not work, stations in New Caledonia. Not bad for a quarter wave mounted on a steel pipe.

This family DXpedition does not break any records. However, it may prompt other amateurs to "have a go" on the average family holiday. The number of contacts made was not particularly large, but the number of QSL cards seemed a lot when I sent them out. The purpose of the operation was not to make a large number of contacts. Rather, it was to have fun and add to the enjoyment of my annual holiday. I believe that I achieved this aim

I commend this type of simple low-key operation to other amateurs as a very fulfilling activity. I had fun.

I look forward to reading of further simple family DXpeditions in the future. ar

Transistor Works at over 100 GHz

Roy Taylor VK2TR
from Computerworld Australia
September 1988

Melbourne - Siemens Ltd reports that players in leading edge communications areas, such as radar, space travel and satellite technology are interested in its gallium arsenide transistor, which operates at frequencies of more than 100 GHz

Siemens' US operation and researchers at New York's Cornell University have designed the transistor. It is called a modulation-doped field effect transistor (Modfet) and uses a sandwich chip.

Unusual Ship Visits Australia

Ron Churcher VK7RN
Box 277, Devonport, 7310

A strange ship is visiting our Australian coastline — well, they may object to the "strange" — let's say different.

I refer to the MV Doulos, a missionary training ship operated by "Operation Mobilisation", a world-wide inter-denominational group with headquarters in West Germany. On board are about 300 young people from over 40 countries. It has two other claims to fame - it is the oldest passenger ship (1914) still operating, and it operates the world's largest floating bookstore. Over half a million books. Its first Australian landfall, Devonport, was its 200th port of call. Operated as a "faith" ministry no-one on the ship, from the captain down, gets paid!

Where does Amateur Radio come into this?

Firstly, the Radio operator, Manfred from West Germany, operates as VK7AAT and usually can be found around 14.31 or 3.69 MHz. Look for him.

But amateur radio can come into the Doulos' life by interested amateurs allowing these young people to talk to their families back home. On three occasions, Canadian and eastern US people spent the evening in my shack - TALKING. The amateurs in Canada and USA cooperated wonderfully, demanding that they be allowed to put through long distance phone patches if necessary - time seemed no worry.

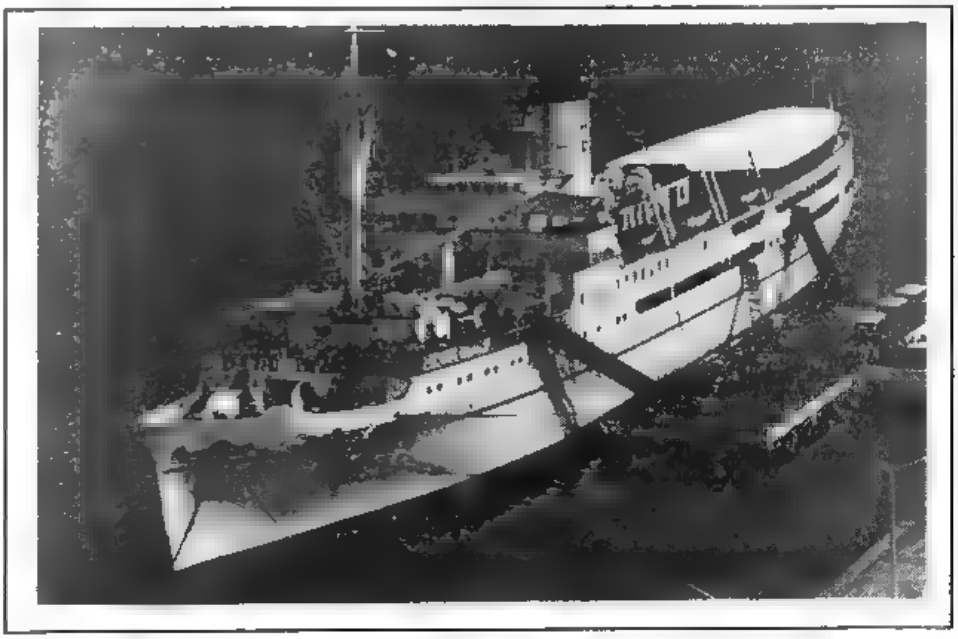
The joy on the faces of the people as they talked and the emotion in the voices of their parents made it all worthwhile.

Amateur Radio Serving The People of the World - Be Part of It.

Listed below is the schedule of their Australian visit. Your contacts would be Manfred (above) or Joe Parker, Book Store manager.

Doulos Schedule 1989-1991 Asia & Oceania

Sdist miles	STime d	hr	Port	Country	Dates Arr	Dates Dep	Number of wknd	Number of days
1170	4	21	Devonport, Tas	Australia	2 May	15 May 1989	2	14
584	2	10	Adelaide, SA	Australia	18 May	30 May	2	13
514	2	8	Melbourne, Vic	Australia	1 Jun	20 Jun	3	20
582	2	10	Sydney, NSW	Australia	23 Jun	11 Jul	3	19
70		7	Newcastle, NSW	Australia	12 Jul	25 Jul	2	14
450	1	21	Brisbane, Qld	Australia	27 Jul	15 Aug	3	20
275	1	4	Gladstone, Qld	Australia	16 Aug	29 Aug	2	14
246	1	1	Mackay, Qld	Australia	30 Aug	5 Sep	1	7
215		22	Townsville, Qld	Australia	6 Sep	26 Sep	3	21
174		18	Cairns, Qld	Australia	27 Sep	17 Oct	3	21
			expected changeover of personnel ..... ca.			2 Oct		
472	1	23	Port Moresby	Papua New Guinea	19 Oct	7 Nov	3	20
1340	5	14	Vila	Vanuatu	13 Oct	21 Nov	1	9
608	2	13	Suva	Fiji	24 Nov	12 Dec	3	19
416	1	18	Nuka'alofa	Tonga	14 Dec	27 Dec	2	14
1612	6	17	Honiara	Solomon Islands	3 Jan	8 Jan 1990	1	6
340	1	10	Kieta	Papua New Guinea	10 Jan	16 Jan	1	7
262	1	2	Rabaul	Papua New Guinea	17 Jan	30 Jan	2	14
412	1	17	Madang	Papua New Guinea	1 Feb	14 Feb	2	14



The MV Doulos - The world's oldest passenger ship.

Designing A QSL Card

Ken Matchett, VK3TL
PO Box 1
SEVILLE VIC 3139

There have been in the past several articles on QSL design and QSL procedures. Most have been written with an eye on making the onerous task of QSL managers and their helpers a little easier. This article (dealing with both QSL design and procedures) is no exception. There will be points of disagreement since we all have our own ideas upon the subject. The article is not in any way a criticism of existing QSLs but is offered mainly as a guide for those to whom the subject of QSLs is new. It is the writer's hope that it will prove useful to those who read it.

1. SIZE AND SHAPE

No single factor is a greater cause of unnecessary problems than that of QSL size. It should be remembered that outward QSL managers are obliged to forward QSLs in bulk. If a card is appreciably larger than the majority of QSLs received, it is folded and can thus be ruined (as far as its aesthetic value is concerned). So many beautiful QSLs end up at their destination little different from a creased, and often torn, chunk of cardboard. Apart from adding to the difficulties of QSL managers, the postage is at a considerably higher rate should one wish to send such a QSL direct. Choose a size of QSL that will fit into an ordinary envelope. Avoid long or square-shaped QSLs at all costs.

There is no such thing as an "average" size QSL, but the common recommended size is 140mm by 85mm. Many envelopes on the market measure 145mm by 90mm, and so can take one or more such QSLs comfortably. The 140mm x 85mm QSL will also be found to have pleasing proportions. Some radio amateurs go to a lot of trouble to print very small QSLs or even odd-shaped QSLs; these may engender comment, but they are really a great nuisance to QSL handlers, and are almost impossible to file.

If making use of oversize postcards, ensure that they are bulk-guillotined before you design and print the written material upon them

Unless an artistic design strongly demands it, avoid vertical-type QSLs. Horizontal QSLs are easier to both read and file.

2. WEIGHT, QUALITY AND COLOUR

The weight and thickness should be such that the card can stand up to considerable handling but not be so heavy that unnecessary postage costs are incurred. Printers use the GSM numbers as a measure of weight (grams per square metre). Card weighing less than 200 GSM is inclined to be flimsy, whilst one weighing more than 300 GSM, although of superior quality, possibly will not justify the additional cost. The growing use of computer paper QSLs (which are both larger than the recommended size and very much flimsier) can make the QSL managers' task of packaging a really onerous one.

Many printers will employ art board, which is white and has a gloss surface. If you want a coloured card, ask your printer to show you the available range in systems board. If a coloured gloss surface is required, cast-coated board is available, but is fairly expensive. If choosing coloured board and/or printing, ensure that there is sufficient contrast between the board and the print. As a suggestion, black, dark blue or bright red lettering upon yellow will be found to be both attractive and most readable.

3. ONE OR TWO-SIDED QSLs

Apart from design, one has to decide upon whether to have a card printed on one or both sides. Obviously one printed on one side only will be considerably cheaper. However, if you are keen on design, then a card printed on both sides will allow you infinitely more scope, since the data will not interfere with the chosen design. If you anticipate a change in QTH, you might think about using a rubber stamp with which to print data on the reverse side of the card.

4. DESIGN

(a) FRONT SIDE OF QSL Apart from the scene, drawing or photograph (if these are options), the most prominent feature should undoubtedly be the sender's callsign. If printing this upon a postcard or similar pictorial representation, you will need some good advice from your printer since nothing is worse than a callsign that can rub off over a glossy surface. In any case, make sure of these things:

(i) Set the callsign up in such a size that it is prominent. (Suggestion: approximately 18mm or nearly 3/4 inch) preferably near the top of the QSL. If printing upon a photograph you may be forced to print on that part of the card where the photograph is lighter. On a one-sided QSL it is essential that the sender's callsign is much more prominent than the receiving station's callsign, otherwise QSL sorting will become a difficult task.

(ii) Always print horizontally. Vertical callsigns are not easy to read quickly. Obliquely printed signs too are not to be encouraged.

(iii) Do not use dots or hyphens in the callsign, and make all letters and numerals the same size and of equal spacing.

(iv) If two or more callsigns need to appear on the QSL, make use of small boxes next to the callsigns (in which a tick or cross may be placed). This will avoid the scratching out of the unused callsign(s).

(v) Have the callsign printed in plain letters. Avoid old-fashioned lettering (e.g. "Old English") and modern computer-type lettering, which many find quite difficult to read. The letters and numerals should be bold but simply printed. Unless you are particularly skilful, avoid the temptation of incorporating the callsign in an artistic design or drawing. It may be creative, but it is often a headache for others who have to decipher it. Make your callsign stand out. As far artistic design is concerned, this itself presents a challenge to the designer. Perhaps the following points may help:

1. Keep the design simple. Some QSLs seem to have a "bit of everything" on the front, which detracts from the central theme or callsign

2. If you decide upon a sketch (and this is a difficult task) pay some attention to accuracy Either use a tracing method or seek the advice of a professional. This applies particularly to map outlines.

3. If you are printing the callsign over a background scene, ensure that the scene is not too lightly printed. Several excellent scenes cannot be appreciated because superimposed printing almost completely masks them.

4. As mentioned previously, printing a callsign on the glossy surface of a postcard can present difficulties, but in many cases,

it can be done. If not, such a QSL displayed on a wall would seem to be nothing more than a postcard. When the callsign appears on the front, however, the pictorial QSL can become a most attractive idea.

(b) REVERSE SIDE OF QSL The most prominent feature here will be the callsign of the station to which the QSL is to be sent. It is written clearly (in block letters about 15mm high) on the top of the card. It is prefixed by the words "TO" or "TO STATION" (which can be printed on the QSL) so that there can be no confusion of intent. This will greatly facilitate sorting by QSL managers. With some outwards QSL bureaux, special procedures apply. Enquire of your club whether an information sheet on the subject is available. Ensure that the correct QSL information is received when working a rare DX station. Write both the station called and the QSL manager's callsign on your card. Remember that some rare DX countries have no QSL bureau so it is a waste of time sending your card to your QSL bureau if no QSL manager is specified. Obtain up-to-date information from DX news in amateur radio magazines. Ensure, too, that your outgoing QSLs are sorted before forwarding them for dispatch (as well as checking, of course, that you are a current financial member!!!).

• Double-check the accuracy of the callsign from your log. Use an oblique stroke through the letter "O" in order to indicate a zero, and dot the letter "I" if this could be read as a numeral. Pay particular attention in writing the letter "U" (making it flat at the base) so that there will be no confusion with the letter "V". Ensure too that the curve of the letter "C" is exaggerated so that it will not be misread as an "L" (always made with two straight lines).

• If the QSL is one-sided only, the receiving station's callsign (clearly printed) will be the first piece of information given in the data sent, and not be hidden amongst the RST report or dates. Even though on a one-sided QSL the receiving station's callsign will, of course, be written in, it will be of great assistance to QSL managers if this callsign could also be written on the top of the blank reverse side of the QSL. In this way, there will be no need for the card to be turned over when sorting.

• Additional but non-essential information such as awards gained, equipment used, pse QSL and 73 (never 73's) can be included, but should not be allowed to eclipse the essential data on the card.

• Ensure that the words QSL (or confirming QSO) are stated. Some award managers insist that the QSL is seen to be a confirmation of a QSO as distinct from a shortwave listener's report. In order to cater for shortwave listeners' reports, some operators print "your SWL report (or similar)" as an alternative to the "confirming QSO" printing on the QSL.

• The phrase, two-way or 2X CW (or whatever mode is used) should be used. Some award rules stipulate this requirement.

• Always use UTC (GMT) and Greenwich Mean Date for DX reports - never local times. Employ a four-number sequence for the UTC.

• When writing in the date, use the written word for the month, eg: 7 March 1989, and not 7.3.1989, since Americans and many other DX stations will surely read this as the third of July 1989. This has cost many an operator a DX QSL. Some radio amateurs make use of "data boxes" at the top of which is printed DAY - MONTH - YEAR.

• Include on the QSL your name and full postal address, including postcode. Several receiving stations will depend upon this information in order to reply to your QSL.

•Remember, when filling in a QSL, to avoid making any alterations. Rewrite another QSL. Alterations on QSLs submitted for awards are generally rejected. All data should be in ink, never in pencil.

• Remember that your report will not be complete unless each of the following is recorded: station worked, date, time, frequency, mode and RS(T) evaluation.

QSLs these days are costly items. They are also valued by many receiving stations. These are reasons why a little thought given to QSL design can give greater satisfaction to other radio amateurs, save you money and facilitate the QSL delivery process. Let us look at three QSL cards:

Parabolic Dishes Worry Councils

Satellite dishes are as common as TV antennas in some countries and in South America they've been nicknamed "The white daffodil".

It was now common in Australia to see dishes pointing towards Australia's national satellite Aussat which is geostationary at the equator.

Municipal councils in Victoria and probably elsewhere in Australia appear not to have control over the installation of the dishes.

While the dishes are mainly confined to TAB agencies, hotels, and some business premises, councils are concerned about them appearing in back yards of private homes.

The adjoining Melbourne east-suburban municipalities of Box Hill and Nunawading have expressed concern about the dishes appearing in the backyard of homes.

The Ministry for Planning and Environment has written to councils requesting comment on the need for planning control over satellite dish antennas, ar

VK4VC

An excellent example of a one-sided QSL card. The sender's callsign is prominent, and the data boxes clearly give all the information required. There is no confusion whatever over what station is sending the QSL and the station to receive it. Note, too, how clearly the receiving station's callsign has been recorded in the data box and how other information given (including the full postal address) does not eclipse the data of the QSO.

QUEENSLAND AUSTRALIA

VK4VC

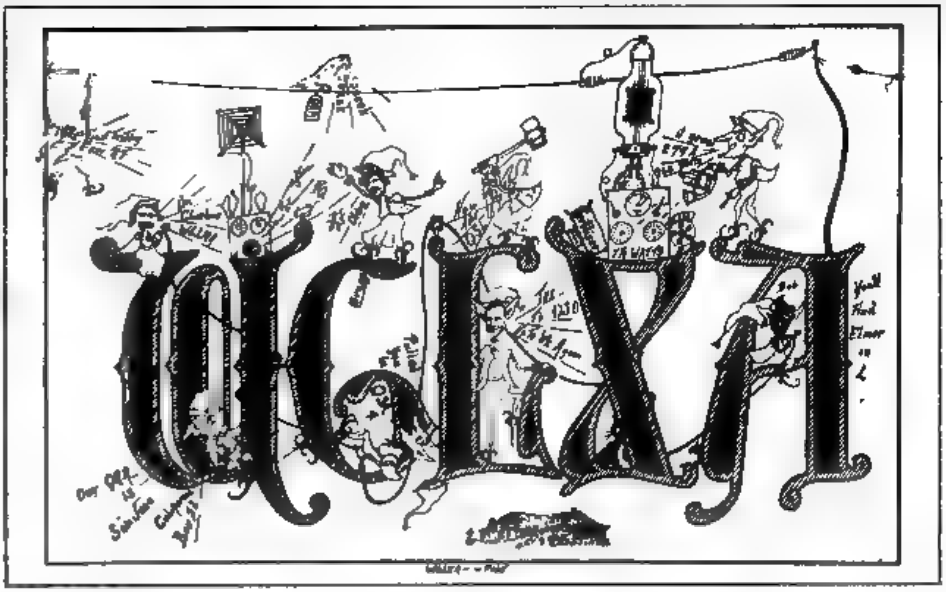
TO RADIO	CONFIRMING QSO						
	DAY	MONTH	YEAR	GMT	MHZ	RST	MODE
VK3KUB	16	12	87	2313	144	59	2X SSB

KEN. CHIVERTON
3 BAMBAROO AVE.,
NAMBOUR. 4560
QUEENSLAND, AUSTRALIA

73 Ken

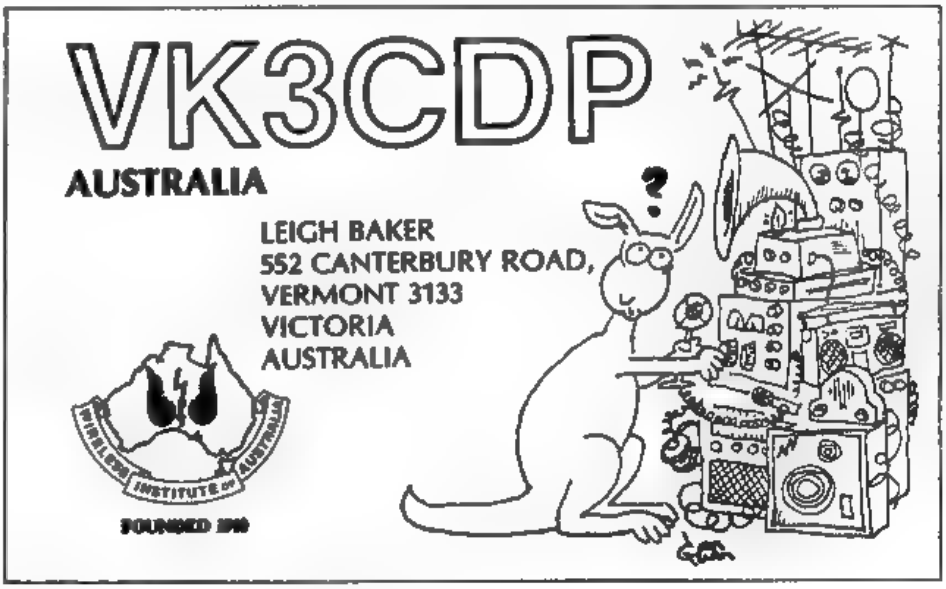
☑PSE QSL

☐TNX QSL



W6LXA

Although considerable thought must have gone into the fine detailed drawing shown, the reader has to look twice to work out the callsign of the station. Clarity has, unfortunately, been sacrificed for artistry.



VK3CDP

A fine example of a two-sided QSL. Many VK QSLs display Aboriginal motifs, coats of arms, the Australian flag and native animals. This one, printed in the colours green and gold, displays a humorous sketch embodying a kangaroo. Despite the fact that the card also shows the operator's name, QTH and the WIA emblem, the designer has ensured that the station callsign remains a prominent feature through a wise choice of varying letter-size printing.

ar

Travellers Net Changes Frequency

Barry Wilton
VK3XV

The net frequency was changed from 14.106 MHz to 14.116 MHz on 1 June 1989. There is no change to the net time of 0300 UTC

ar

Interference, Spectrum Pollution and Reception Problems

Jim Linton VK3PC

Changes to Departmental Policy

The Department of Transport and Communications (DOTC) has received some bad press over its plan to charge an upfront fee before investigating complaints of radio and television interference.

The media has run stories critical of the move, claiming it was a revenue making exercise.

According to the reports, the elderly and disadvantaged would suffer because they could not afford to pay the planned fee of $60.

The Department has not come out with a press release to defend its plan to charge before it investigates interference to TV and radio broadcast reception.

It feared that publicising the current free investigation service would result in a deluge of reception complaints which it could not handle.

Delegates to this year's WIA Federal Convention were fortunate to be addressed by the Director of DOTC's Interference Task Force, John Higginbottom.

He commenced his address by correcting what the Department saw as two misconceptions concerning the proposal. Mr Higginbottom said the plan to charge a fee was not a revenue making exercise.

Secondly, the Department will continue to investigate genuine interference complaints involving the reception of broadcasting services, he said.

He made the point that interference caused to a radio communication service will continue to be investigated free.

This type of interference is a spectrum management problem and its investigation is an overhead built into licence fees, Mr Higginbottom said.

He explained that DOTC field staff were overloaded with investigations of interference which mostly turned out to be receiving system problems, or faulty power lines.

"There's 16,000 complaints of alleged interference currently handled free of charge each year. Some 75%, or over 12,000, are readily found to be not real interference," Mr Higginbottom said

Statistics show that receiving systems accounted for 58% of complaints, and power lines were to blame in 36% of cases.

Mr Higginbottom said that of the 58%, some 20% related to immunity problems, the ability to reject unwanted signals.

DOTC wants its skilled, well-equipped staff to be able to quickly provide assistance to people who really need it and have no where else to go - that is, in genuine cases of interference.

The Department cannot do this at present because it is overloaded with requests to fix problems which can, and should be dealt with by TV service technicians or electricity authorities.

Mr Higginbottom emphasised that while Departmental officers can give advice on these problems, they are not in a position to fix any of them.

Free Service Costs $1 Million

In recent years, there has been a growing tendency for members of the public to call on the Department's investigation service, primarily because this service is free.

Each time the Department's highly skilled staff attends, it uses human and equipment resources worth about $175 which amounts to about to $1 million every year.

Mr Higginbottom said the planned call-out charge is intended to encourage people to go directly to their service technician or to their local electricity authority, where appropriate.

In a public education program, to begin soon, a glossy handbook will be issued free to help the non-technical person identify the likely cause of their reception problems.

In addition to television and radio problems, the handbook will also cover home entertainment equipment.

No Mandatory Standards for Power Lines

The handbook will show the public the effects of power line interference to TV reception, and advise that an approach should be made to the electricity authority where faulty power line devices are implicated.

The Government has not used the Radio communications Act to set emission standards for power lines and distribution systems.

Emissions from power lines cause spectrum pollution which is of concern to the Department. It is considering the question of emmission standards for power lines and associated equipment.

The handbook will identify other reception problems and their causes such as inadequate or faulty antenna, or poor immunity.

The recommended solution will be to contact a qualified TV serviceman to check out and fix the antenna or take action to improve receiver immunity.

Mention will be made of typical filters which can be fitted to a TV set to cure some cases of poor immunity.

Interference to other domestic equipment including recorders, amplifiers, telephones and intercoms will be cited as requiring a serviceman or help from the manufacturer.

Mr Higginbottom said DOTC is consulting with the TV service industry to highlight the role of TV servicemen in dealing with reception problems, particularly those due to a lack of receiver immunity.

Power supply authorities were being advised and their help would be sought to overcome complaints of degraded TV reception caused by power line faults, he said.

Telephone Advisory Service

In addition to providing the new information booklet, the Department proposes to introduce a telephone advisory service, to help members of the public who need further advice.

This service will be of particular assistance to the elderly and disadvantaged.

Departmental officers will also provide liaison/referral service with electricity authorities, in any cases where direct approaches from complainants do not resolve the problems.

DOTC hopes these measures will virtually eliminate its involvement in cases of straight-forward power line interference and reception problems in all except the genuine interference problems

Mr Higginbottom said by greatly reducing the unnecessary workload investigating power line, immunity, and receiving problems, DOTC will be better able to cope with genuine interference.

However, a member of the public can still disregard the advice in the handbook and that give over the phone by DOTC, pay a $60 fee, and request an investigation.

Concerns Expressed by the WIA

The Institute believed DOTC should put in writing its findings after investigating any complaint where it was inferred, or an allegation made that interference was caused by a neighbouring Amateur station.

If an Amateur station is blameless, a statement should be available, e.g. some form of certification, for the protection other radio amateur. It would also help avoid any misunderstanding which can arise when a member of the public is verbally told "it's an immunity problem".

The WIA believes certification of the problem will assist the complainant to advise a TV serviceman of the problem accurately. Without such a document, the general public could continue, wrongly, to blame the nearby amateur installation for causing interference.

This type of situation based on ignorance or misunderstanding has the potential to result in a blameless radio amateur facing harassment, or even cost litigation from a disgruntled neighbour. ar

Western District Christmas Party held in Forbes. Barbeque was washed out by a thunderstorm. Standing L to R: Paul VK2BRW, Peter VK2EDD, Peter VK2BXQ, Nev VK2DR, Brian VK2DHO, Gio VK2FJP, Vie VK2EVM, David VK2BJI, Ron VK2DDO, Steve VK2MEM, Adrian VK2MCY, Alan VK2KW. Seated L to R: John VK2AMV, Walter VK2NND, George VK2PXG, Marg VK2PNG, (ex P29NUN), Peter VK2ETK, VK2XAQ had to leave early. Photo: John Meagher VK2AMV.

Author's Corrections

Frank Antonovic VK4AOI
16 Haydon Crescent
Townsville 4814

PEP Power Meter - June 1989

Thank you for publishing my article on 1 kW SSB power meter in June 1989, but I am afraid gremlins got into it in the rewriting.

The beginning of the article is confusing and not correct.

Both meters, 1 KW and 150 W with BAR and DOT display, indicate instantaneously RMS power on CW and peak of audio cycle. BAR decays rapidly, but DOT holds indication for part of a second.

Probes should be in specified size metal boxes, and resistors 1 W, L 13mm, D 4.5mmm (body, not caps) correct, as ones made in Taiwan. Dick Smith has them. Otherwise, frequency response will be very far from flat.

Different physical sizes of resistors have different I and c.

150 W Meter, DC Calibration

One sentence is left out...for that LED. Then adjust P1 for second LED to just light up at one fifth the voltage shown in the table for that LED. Repeat the process.

1 kw, DC Calibration

First LED of display turns on slowly, others snap on fast. So check that P1 is set correctly after following the described calibration. Set SW1 to range III, set DC power supply to 22.9V (for 50 Ω), adjust P2 for tenth LED to just turn on. Then check that second LED on ranges III and II just light up for a tenth of voltage shown for that LED. If it is not right, increase P1 slightly, and repeat the process, until you get it right. That sets ranges II and III. For the low end of range I, there is no fine adjustment, D6 takes care of that. ar

QSLs From the WIA Collection

Former African Colony

Ken Matchett, VK3TL
HON CURATOR,
WIA QSL COLLECTION
Po Box 1 Seville Vic 3139
Phone (059) 64 3721

ZD6DT

This QSL dated October 1958 is from the former British Protectorate of Nyasaland. The QTH is given as Zomba, the operator being David Taylor. At that time, Zomba was the centre of Government ministries before the shift to the country's new capital of Lilongwe in the late 1970s.

David, employed by the Ministry of Posts, was particularly active for many years from Nyasaland, and an excellent QSLer. He operated from the country just after the war when a member of the Royal Signals. The year of the QSO, 1958 was the year in which the present-day Life-President, Dr Banda returned to Nyasaland from the USA to assume political leadership of the country. He ended up in prison the following year, but went on to lead his country to independence.

Malawi lies on the east side of the African continent, being bounded by Zambia to the west, Tanzania to the north, and by Mozambique to the east and south. It is a small nation, being half the size of Victoria, with the population about half that of Australia.

The Portuguese reached the area in the sixteenth century, but the first significant contact with Europeans was the arrival of David Livingstone along the shores of Lake Malawi in the year 1859. Scottish churches were soon established, one of their major aims being the abolition of the slave trade. In 1891, the British established the Nyasaland Protectorate, the word Nyasa meaning "lake" (Lake Malawi occupies approximately one fifth of the total area of the country)

The Radio Amateurs' Handbook of 1930 indicates the provisional allocation of the prefix block ZBA-ZHZ, which was to be used by the governments of several British possessions and protectorates, the prefixes ZB, ZC, ZD, ZE and ZF being issued. Of the ZD prefixes, Nigeria ZD2 was the first allocated, the Nyasaland ZD6 listing occurring in 1936.

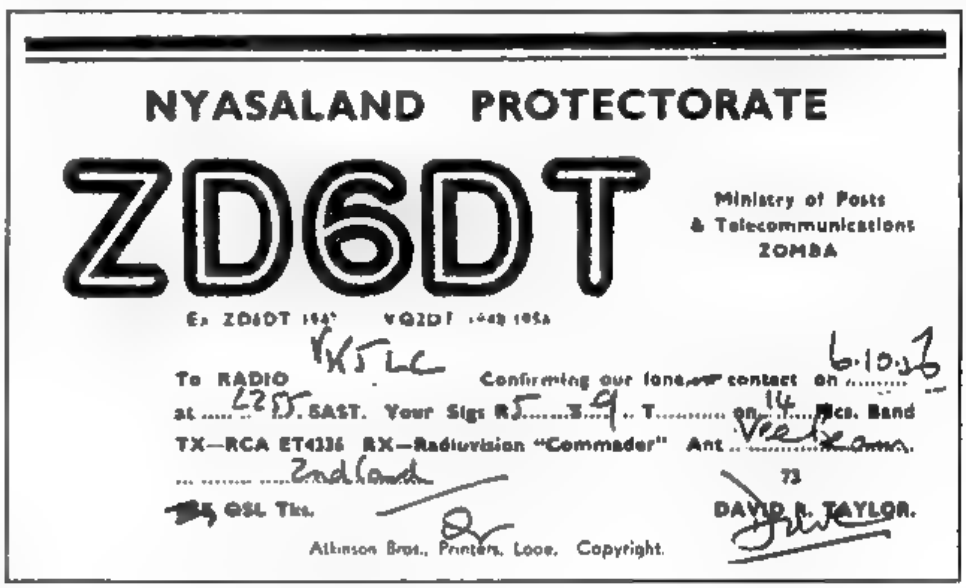
7Q7GN

Malawi became an independent nation on 6th July 1964 under its new name as a member of the Commonwealth of Nations (formerly the British Commonwealth). Two years later, Malawi adopted a new constitution and became a republic. The name "Malawi" is derived from the Maravi, a Bantu people who came from the southern Congo several hundred years ago. The 7Q7 QSL originates from Blantyre, the country's largest city and its commercial centre. The prefix change from ZD6 to 7Q7 was made after independence, from the ITU allocation of 7QA-7QZ. This QSL portrays a clever silhouette of a native with a tom-tom. The population of present-day Malawi consists of several native tribes, the Chewas on the west side of Lake Malawi making up the bulk of the population. There are definite tribal differences, but no significant friction seems to exist, the concept of a Malwaian nationality being gradually accepted.

If you would like to play a part in building up the WIA QSL collection and to save something for the future, would you please send a half-dozen (more if you can spare them) QSLs which you feel would really help the collection along.

All cards are appreciated, but we especially need commemorative QSLs, special-event stations QSLs, especially assigned call QSL's (eg. VK4RAN), pre-war QSLs, unusual prefixes, rare dx and pictorial QSLs of not-so-common countries. Could you help? Send to PO Box 1, Seville 3139, or phone (059) 643 721 for card pick-up or consignment arrangements for larger quantities of cards.

The Wireless Institute of Australia would like to thank a further group of generous people who have contributed towards the collection.



Alex	VK2BYO
Ken	VK3AKK
Betty	VK4BET
Ossie	VK3AHK
Ken	VK4ABL
Jim	VK6RU
Vic	VK5AGX
John	VK6BA
Steve	VK2PIF
John	VK3KMW
Kevin	VK3ZI
Brian	VK4LV
Robin	VK6LK
Eddie	VK8XX
Chas	VK4UC

Also thanks to the friends and families of the following "silent keys" who have helped the collection along

Allan Heath	VK5ZX
Arthur Stehn	VK4IS
Arthur Heckenburg	VK2AHL
Morrie Pfeffer	VK4ANU
Mal Ireson	VK3AIR
Andy Domjan	VK3AEW (VK1XX)
Henry Pearce	VK3EN
Geoff Haskard	VK5RH

If it is your sad duty to assist in the disposal of equipment for a family of a "silent key", would you kindly approach the family to see if it would like to donate QSLs to the WIA Collection? Ken will send a circular to the family indicating what we are trying to achieve.

DX QSL Contributors' Ladder

Here is a further list of DXers who have contributed rare DX and unusual prefixes to the collection. (See page 55 of the March 1989 issue of 'AR' for details of the Contributors' Ladder)

Chas, VK4UC - (54 points) PYØRE Trinidade (new country to our list). Prefix: ZAØ. Special calls: OJØMR PYØSP

Eddie, VK8XX - (50 points) 3D2XX Rotuma (new country to our list)

Vic, VK5AGX (29 points) Prefixes: ED7, NN2, NZ5, NB3, KR1, ND8, KI9, NI9, NG9, EV1, TOØ, ZV2, OF8. Special calls: DL4WCY, DL9WCY, DFØ1R

John, VK3KMW (8 points) Prefixes: 6C35, DH1, SO5, TI1

Our thanks to all contributors. How about a few more of you FB DXers joining in? Will you help?

SPOTLIGHT ON SWLING

Chinese Jamming

Robin L Harwood VK7RH
52 Connaught Crescent
West Launceston 7250

This month, the spotlight has turned on China. Student protests erupted in Beijing's Tienanmen Square in late May, just at the time when the world's media was in Beijing. Soviet President Gorbachev had come for a Summit Meeting with Chinese leaders, after a thirty year hiatus. This meeting was supposed to be the main news, but the protesting students outside quickly took attention away from the Summit. These protests continued for another three weeks after the Soviet leaders had left. Because the Chinese domestic media did not cover the demonstrations, people in other regions of that populous nation tuned-in to international radio to find out what was happening in Beijing.

Eventually, the authorities clamped down martial law on the city, although it took some time to implement because of public resistance. One immediate effect was the re-introduction of jamming of international radio broadcasts in Mandarin (Putonghua) and other Chinese dialects. The VOA in Washington was the first to experience jamming from 22 May, with three of its 5 channels being heavily jammed. Other broadcasters, such as the BBC and Radio Australia, and even Radio Moscow's Chinese Service, received jamming. A sign of just how nervous the Chinese became, was when they even jammed the VOA feeder from Delano in California to the Philippines which was on SSB.

The day that I am writing this, news has come in that the Peoples' Revolutionary Army violently put down the Student Protest with hundreds, perhaps thousands, of casualties on the streets. Jamming is, therefore, expected to become even more intense in the days and weeks ahead, for the domestic media, so far, have suppressed details of what has happened. There, listeners will be tuning in on short wave to find out what is happening. Frequencies to watch are (VOA) 7285, 11965 AND 15410 between 1000 and 1500 UTC; (BBC) 7180 and 11955 kHz between 1000 and 1045, 1200 and 1245 UTC, and (Radio Australia) on 7120 kHz between 10 and 14 hours UTC. Check also the VOA feeder on 9350 Khz USB. All are in Mandarin or Putonghua as it is known locally.

The "International Radio Daze" in Berlin on the last weekend in May turned out to be a flop, despite extensive publicity, with only 60 turning up. Half of them were broadcasters. This event was designed to be a bridge between the broadcasters and listeners, but DX'ers boycotted it, arranging their own gathering in Sweden a few days later. Activity there was concentrated exclusively on DX'ing and technical matters. You can expect the rift between DX'ers and international broadcasters to widen. For example, many international stations have discontinued issuing QSL cards, sending no-details response cards.

Radio Canada International is facing severe budgetary cutbacks, threatening the viability of their services. Their parent organisation - the Canadian Broadcasting Corporation, have had their budget slashed, and one option is the complete axing of RCI. As you are aware, RCI has entered into agreements to share broadcasting senders with Chinese, Japanese and Austrian organisations.

While the Chinese agreement is in doubt at present, because of the political turmoil, the use of the Austrian and Japanese senders has improved RCI's audibility in Asia and the Middle East.

Radio New Zealand International is on target for the commencement of their new service to the central Pacific, using their new 100kW sender near Taupo. It is planned to commence in mid-January to coincide with the Commonwealth Games in Auckland. They plan to use six or seven indigenous languages. Radio New Zealand International are hoping other target areas could be added later, depending on finance.

Keep an ear out for VNG - Australia's Time and Frequency Service, on the standard frequencies of 10 and 15 MHz. They did hope that their experiments on these frequencies early last month in daylight hours will see them go ahead permanently on them. The 5 MHz signal of VNG from Llandino (NSW) is heard here well in the evening hours.

Well, that is all for July. Until next time, the very best of listening and 73.

■

Hand-Held Holy Bible

A pocket-sized computerised Bible went on display recently at the annual Consumer Electronics Show in Chicago, and should be available from October. The EB200 produced by SelectTronics Inc, contains the text of the Bible and measures 9 x 15.5 x 2.4 cm and weighs less than 168 grams.

A user of the hand-held electronic Bible can find texts by typing in parts of a passage, for example the familiar "Valley", "Shadow" and "Death" words of the 23rd Psalm.

The information compression technology it uses is expected to also result in the development of portable language translation devices. ar

INTRUDER WATCH

Catching Up the Backlog !

Bill Horner VK4MWZ
26 Iron Street
Gympie 4570

For the last couple of months, you will have all noticed the absence of this column. For the most part, I am unable to control the APO, so needless to say, your reports are late, and thus, my report is late, and I have missed the deadline. How can you help? Easily - Please make sure that from now on you close off all your reports by the 25th day of each month, and forward your logs to me ASAP. Then, just maybe, I will get them in time to make the deadline for our magazine.

There have been some enquiries from various clubs throughout, and some personal enquiries also. I look forward to receiving your logs.

To date there have been 7% more intruders logged compared to last year. These appear to be increasing, as three months ago the figure was only 4.7%. If any of you wish to receive a copy of my report, it is available for a cost of $8.00 per year.

This is the total cost for twelve months. Your Federal Councillor receives one, so if you wish to see his, then please enquire. In Queensland, a copy of the report is issued with the monthly divisional meeting minutes. It is very important to keep up with what is going on

VK4KEL Geoff, from the Sunshine Coast, also has been able to list the report on Packet Radio BBS, so if you have access, then try there.

I have said it before, and I say it again, the ball is in your court. It is up to you to get the most out of the bands.

Old Habits Die Hard . . .

even though you have all been requested to kindly close off your reports on the 25th day of each month, and forward them to me ASAP By doing this we can get some guarantee that they will arrive here in time for me to get them collated, and a report done in time to make the deadline for this magazine. For the most part, a lot of reports arrived here in time, however, some didn't get here at the time of writing this. Again, I ask all of you, to please send your reports in as soon as you can get them to the PO

Reports received so far, VK's: 2PS, 2COP, 2EYI, 3XB, 3CIS, 3MBU, 4BG, 4OD, 4ADY, 4AKX, 4 BHJ, 4BTW, 4BXC, 4VLT, 5GZ, 5TL, 6RO, 6XW, 6NHX, 8HA and T Baines from VK7. Many thanks to those people. A lot of intruders reported on 10 mtrs, it appears that in Indonesia the amateurs don't even seem to be worried by the AM stations

A classic recently was reported where an amateur actually got a name and address of an intruding station who asked him to QSL direct.

Remember - Get Your Reports In.

WIA Federal Intruder Watch Report for April 1989

FREQ (khz)	Mode	Date	UTC Time	Id	Comments
7000-7002	dab	mni	1130 +	.	tone carrier.. phone patch
7002	a1a	dly	1158 +	V	beacon
7004-7011	nOn	04	1140	.	
7012-7014	2x r7b	mni	0958 +	.	
7009	a1a	21	2058	UMS	5 figure groups
7028	f1b	04	1139	.	
7039-7043	f1b	20	2213+	.	Fax 6 khz wide
7053	f7b	mni	1130 +	.	USSR. .. using UGX
7080	A3E	mni	1120 +	.	Radio Bangladesh
[illegible]	f1b	12	1105	.	
14008.5	r7b	07	0815	.	multi mode & channel
14024	f1b	mni	0713 +	.	400 hz shift rtty
14023.5	f1b	mni	0823 +	.	
14012	a1a	05	1108	DCLI	calling 3mxzdo
14068		mni	0349 +	.	teletype wheel
14069-14072	f1b	mni	0505 +	.	
14072-14078		mni	0536 +	.	teletype wheel
14079	f1b	mni	2345 +	.	fax 3 khz wide
14075	a1a	mni	1400 +	VRQ	calling CQ
14070	a1a	mni	1032 +	VBX	calling VPO
14081	a1a	23.03	0139 +	KF8	calling CQ - QRV
14085	a1a	mni	1000 +	NPO	calling CPQ
14100	a1a	10	0930 +	NBZ	calling ZBK
14102	a1a	02	1030 +	EYU7	De EYU7 BT U55T DA5N AR ???
14140.5	f1b	dly	0610 +	UMS	
14124.6	f1b	dly	0406 +	.	sending "V" in CW
14153	r7b	mni	0734 +	.	
14167.5	f1b	mni	0833 +	.	
14172	a1a	14	1100	PUN8	calling PONM
14172	a1a	24.03	1005	Q28Y	calling BI6M.. QSO
14185	a1a	15	0740	UTL2	called UTL3
14200	a1a	mni	0900 +	VMO	calling VLQ
14212-14215	a1a	dly	1000 +	5VR	calling CPQ
14230-14232	mnu	dly	0648 +	.	multi modes/channels
14250	nOn/a3e	dly	1100 +	.	Russian B/C station (NUISANCE)
14274	a1a	dly	0957 +	CQ5	calling CQ
14294	fsk	mni	0913 +	UIHS4	calling UGN75
14314	a1a	20	0925	FBHJ	calling KNWD and WY25
14318	fsk	21	1010	TL4R	calling NROK
14318	fsk	29.03	1025	XBZ ??	calling J8EU
14337	a1a	11	0640	LQF46	calling LQF15
21000-21002	f1b	mni	0618 +	.	suspect French Polynesian(20995)
21032	f1b	dly	0123 +	UMS	USSR NAVAIL RADIO
21245.5	f1b	mni	0606	.	multi channel
21268.5	f1b	mni	0612 +	.	
21283	fsk	dly	0100 +	mni stns	.. XSC, 3SN, a lot with no ID
21270	a1a	mni	0500 +	FH6	calling 5LH
21320	a1a	mni	0600 +	P9Z	calling XC4
21327	a1a	mni	0510 +	7DR	calling HC3
21345	a3e	dly	0700 +	.	European Stn
214005	a3e	dly	0500 +	Moscow	Midnight in Moscow
21450	a3e	dly	24hrs	Moscow	always tx from Moscow
28425-28465	r7b	10	0810 +	.	S9 multi channel
28575	a3e	15	0824	.	musical broadcast
28815	a3e	04	0011 +	Moscow	another Russian
28901	f1b	dly	0835	CZCAA	50 baud RTTY 425 shift USB normal

Over 2090 CB type stations logged by VK6RO; others logged nearly 750.

Summary:

The logs received need to be neater, with more detailed information

If everyone did similar to VK2EYI and VK4BHJ we would be better served

A lot of intruders logged - approximately 7% more than this time last year.

Try This...

AJ Breen VK6SY advises that "Pelo" rail joiners for OO/HO model railway track make good socket connectors, for such TO3 transistors as 2N3055.

These nickel silver connectors have a good area to allow soldering of 10 or 15 Amp wire.

They cost about $3 per dozen from any good model shop.

VHF/UHF

An Expanding World

Eric Jamieson VK5LP
9 West Terrace
Meningie 5264

All times are Universal Time Co-ordinated indicated as UTC

AMATEUR BANDS BEACONS

Freq	Call sign	Location	Grid square
50.056	VK8VF	Darwin	PH57(1)
50.066	VK6RPH	Perth	OF78
52.200	VK8VF	Darwin	PH57
52.320	VK6RTT	Wickham	OG89
52.325	VK2RHV	Newcastle	QF57
52.330	VK3RGG	Geelong	QF21
52.345	VK4ABP	Longreach	QG26
52.370	VK7RST	Hobart	QE37
52.420	VK2RSY	Sydney	QF56
52.425	VK2RGB	Gunnedah	QF59
52.435	VK3RMV	Hamilton	QF12
52.440	VK4RTL	Townsville	QH30
52.445	VK4RIK	Cairns	QH23
52.450	VK5VF	Mount Lofty	PF95
52.460	VK6RPH	Perth	OF78
52.465	VK6RTW	Albany	OF84
52.470	VK7RNT	Launceston	QE38
52.485	VK8RAS	Alice Springs	PG66
144.022	VK6RBS	Busselton	OF76
144.400	VK4RTT	Mount Mowbullan	QG62
144.410	VK1RCC	Canberra	QF44
144.420	VK2RSY	Sydney	QF56
144.430	VK3RTG	Glen Waverley	QF22
144.445	VK4RIK	Cairns	QH23
144.445	VK4RTL	Townsville	QH30
144.465	VK6RTW	Albany	OF84
144.470	VK7RMC	Launceston	QE38
144.480	VK8VF	Darwin	PH57
144.485	VK8RAS	Alice Springs	PG66
144.530	VK3RGG	Geelong	QF22(2)
144.550	VK5RSE	Mount Gambier	OF02
144.600	VK6RTT	Wickham	OG89
144.900	VK5VF	Mount Lofty	PF95
432.066	VK6RBS	Busselton	OF76
432.160	VK6RPR	Nedlands	OF78
432.410	VK1RBC	Canberra	QF44
432.420	VK2RSY	Sydney	QF56
432.440	VK4RSD	Brisbane	QG62
432.445	VK4RIK	Cairns	QH23
432.445	VK4RTL	Townsville	QH30
432.450	VK3RAI	Macleod	QF22
432.535	VK3RMB	Mount Bunmyong	QF12
432.540	VK4RAR	Rockhampton	QG56
1296.198	VK6RBS	Busselton	OF76
1296.410	VK1RBC	Canberra	QF44
1296.420	VK2RSY	Sydney	QF56
1296.440	VK4RSD	Brisbane	QG62
1296.445	VK4RIK	Cairns	QH23
1296.480	VK6RPR	Nedlands	OF78
2304.445	VK4RIK	Cairns	QH23
2306.440	VK4RSD	Brisbane	QG62
10368.000	VK3RGZ	Pretty Sally Hill	QF22
10445.000	VK4RIK	Cairns	QH23

(1) This is an additional frequency for VK8VF in Darwin, according to Bill VK8ZWM, the changes being handled by Rex Pearson VK8RH

(2) Charlie VK3BRZ writes that this beacon is now operational, and reliability tests are being conducted from the Geelong Amateur Radio Club's premises prior to removal to its permanent site on Mount Anakie. The output power is 15 watts to a 12-element yagi at 20 metres. The antenna is at present pointing towards Adelaide, where it will probably remain until the permanent site comes into use sometime in July, there the proposed antenna is to be stacked crossed dipoles. A possible boost of power to 40 watts is being considered.

The keying is CW as follows: de VK3RGG QF22 and eight seconds of carrier before repeating the cycle. There is a possibility of the keying cycle being changed to include the six-character locator square, and the call-sign becoming VK3RGL.

Charlie would welcome reports, and can be contacted most evenings on (052) 823 167.

Ian Glanville VK3AQU at Myrtleford, writes to say he is hearing VK3RGG with signals to S5 when the Melbourne beacon VK3RTG is barely readable. Similar results are obtained by Phil VK3KUB at Springhurst, north of Wangaratta. Ian asked for more details on VK3RGG and these are listed above.

Six Metres

May certainly produced a dramatic change on six metres. Where previously there had been almost daily contacts across the Pacific, they rapidly declined in VK5. The last such contact at VK5LP was YBØARA at good strength. On 5/5, the American paging stations were very strong on 43.5 MHz at 2300. At this time VK8AH in Darwin was hearing W5 and W8 stations but unable to work them. At 2355 VK5ZDR, VK5NY and VK5RO worked K5CM and N5KM at S2. At 2400 VK3OT was heard working W5, 6 and 7.

On 6/5 at 0008 K4EJW into VK3 and VK5. At 2210 YJ0AMI to VK3OT at 5x9. Rex VK8RH said April provided a daily path from Darwin to Hawaii. K5ZMS on 28.885 said a very widespread Es opening had occurred in the US and 50.110 was so cluttered with local US stations that DX working was impossible!

7/5 at 0005 YJ0AMI was heard at S2 on CW. Since then there has been little else other than Roger VK5NY hearing the beacon H44HIR on 8/5 at 5x9 with no one to work! On 17/5 Roger said the US pagers were strong, but no other signals.

On 4/6 there appears to have been an opening from the eastern states to W and KH6, but no other details.

Darwin Report

Bill VK8ZWM telephoned to report details of the new Darwin beacon on 50.056 MHz, and this is included in the beacon list.

Bill said that there should be increased activity on six metres from Darwin, with Mike VK8ZMA moving from Alice Springs, and the pending July return to Darwin of Graham Baker, formerly VK8GB, now resident in Canberra. Readers will recall Graham set the pattern for collecting six metre countries in Cycle 21, when he amassed 42 countries. No doubt he will quickly add to that score with the return of F2 contacts next September, when six-metre operators from Darwin will include VK8ZWM, VK8RH, VK8AH, VK8ZMA and VK8GB. VK8KG has moved to Melbourne.

At the moment, the areas of contact from Darwin are JA, YB and KH6, the last being very consistent.

From Brunei

Andrew Davis, V85DA, reports from Brunei that during March and April 50 MHz opened to JA most evenings, and below is a summary of his contacts. However, Andrew says he is unable to devote all his time to radio and, because Brunei is a rare country for many operators, he needs to share some time on the HF bands, where he finds that, to many, 3.5 MHz is needed as much as six metres.

Andrew says he is happy to work strings of stations in countries he has already worked, and tries to give everyone a fair go, but finds it irksome that in a dogpile there are operators well aware of the crowded conditions, who will persist in telling him about his rig, the weather and mowing the lawn etc! If you are at fault, please take heed of the comments, and limit your contact to an exchange of signal reports, name and locator square, if that is requested.

Andrew reports the band opened to JA most evenings during January to April. He had almost decided that a large tree in front of his antenna was causing the loss of VK contacts, when he finally worked VK8AH on 23/3! Since then, on the nights VK has been open, he has heard beacons from VK2, 3, 4, 5, 6 and 8, but nothing from 1, 7, 9 or 0. Most contacts have been on 50 MHz, but some on 52 MHz. He runs 10 watts, and has worked more than 500 JAs with that power, but believes in most countries there are stations with poor receivers or high noise levels, as he finds it difficult to equate a 5x5 report he gives a station running 100 watts with the 5x1 he received for his 10 watts.

Andrew quotes VK1DA as his QSL route, and cards arriving there are forwarded to Brunei each month. Cards sent to VK1DA via the Bureau are answered as soon as time permits. Whatever problems may have occurred with previous V85 operators, Andrew assures readers they will receive QSL cards in due course. Although he does not ask for same, it would be courteous to include two IRCs if you are expecting him to send your card by airmail.

4/2: 0549 XX9CT and XX9KA. 23/3: At 1600 beacons VK4RIK and VK8VF heard for first time, at 1606 worked VK8AH for first VK contact, then 15 JAs and VS6SIX beacon. 25/3: 0620-0636 14 VK6s; 1210-1256 20 JAs and VK8AH and VK8RH. 26/3: from 1450 VK8RH, VS6UP, YCØUVO, VS6XMQ, JA4OK, JR6BU. 27/3: from 1132 VK8s ZLX, KTF, ZWM, GF, RH, AV, KTM and ZCU, 1242 YBØARA at 559, 1303 VK6JQ at Broome, followed by 51JAs. 22/3/3. VK5s ZDR, ZK, ACY, NY, LP, ZHS, ZMK, ZTS and beacons JA1IGY, VK6RPR, VK3RMV, VK4RTL, VK5VF, VK8RAS, VK2RSY and VK4ABP, from 1102 worked VKs 3AMZ, 4VV, 3AMK, 8ZCU, 4KIT, 8ZLX, 3KKJ, 4AFC, 3OT, some on 50 and 52 MHz.

1/4: 0245 band sounded dead. Called CQ on 50.100 and worked FK8EB. Than VKs 2ASZ, 3OT, 6KXW, 2BA, 6AKT, 6KDX, 6RO, 6BQN, 6YAB, 6HK, 2QF, 6PR, 8KTH, 5BC, 4VV and P29PL. 2/4: 0152 VK5BC and VK5NY. 3/4: from 1310 many JAs on CW. Heard 5H1HK calling with beam on JA, worked him, then turned beam and worked him again at 559; at 1504 YBØCXN. 6/4: heard 5H1HK working JAs. 9/4: heard VK5ZDR and VK5RO with JA dogpiles.

New South Wales

Nev VK2QF had a theory that during Cycle 21 Ws would arrive at the coast of VK2, and work its way inland to VK3 and VK5. He said that whilst this did occur on a few occasions, more often this time signals arrived at his QTH of Hargraves first, stayed there for half and hour and then moved elsewhere, eg: on 28/3 around 2200 he worked 15 W4s in half an hour, then the band changed. Later on 28.885 VK2BA said he first heard W4s half an hour after the first contact to VK2QF, and VK4DDG reported no contacts until an hour after VK2QF. Nev wonders whether the fact that he is 750m asl has some effect.

In VK5 I noted the pattern was much as Cycle 21. We would hear east-coast stations via a backscatter working Ws, then VK3OT and others would work them; next it would be Hugh VK5BC at Berri, and finally, Adelaide and Meningie if I was lucky!

5/4: W7, W4, XE1, ZF1RC. 6/4: JA, W5FF, ZF1, W6, XE1. 7/4: KHØAC 2202, T2ØJT 2205. 9/4: KEØSC/DU3 0139, JAs, HL1AJY, JR6WPT. 10/4: PJ9JT 2242. 12/4: W4, W6. 14/4: XE1GE to 2140 then called by XF4L for their first VK contact. 15/4: ZL7TPY, T2ØAA 2326. 16/4: JAs, ZK1XH 2136, ZK1CG 2146, CO2KK 2201, ZF1RC. 17/4: FO5DR. 18/4: ZF4L 0018, 6P6JW 0031 and 8P6LL 0034 both 5x9, ZK1XH, 26. 19/4: JA, HL5BAS, XE1GE, XE1MD, V31PC 2349. 20/4: V31PC 2232. 24/4: W5, W6. 27/4: YBØCXN 0037, JAs, XE1, W4, WB4OSN 2224 at S9 for half an hour, KG4SM 2234. 28/4: N5JM 2127, W5VAS, WB5GDN etc, VP5D 2339. 29/4: YBØARA 0146, KH6JJI 0248 at S9+. 7/5: FOØAQ heard at 2141.

Nev has confirmed 30 countries, and awaits confirmation from a further 22.

The United States

Bob WA6BYA sent a letter with my QSL, in which he says that conditions have been so good on 50 MHz that during March/April he worked VK1, 2, 3, 4, 5, 6, 7, 9, 0 and heard VK8GF. Also worked ZL1, 2, 3, 4, 7 and 0. New countries in the Pacific area have been 5W1, ZK1, P29, ZL7, VK9 (Norfolk Island), T20 (Macquarie Island), bringing his total countries worked to 67.

For his more distant stations, Bob has worked VK5s 9C, NY, ZK, RO, ZDR, AMK, EE, NC, AKM, LP, KK; VK6s RO, KZW, IM and YU, VK7HL.

QSL for T2ØDJ and T3ØJT is via W6JKV. Cards will be sent out after 1 June.

Bob uses an antenna system consisting of two M-squared nine-element beams on a two-wavelength boom, spaced 24 feet apart. The top antenna is 130 feet above ground!

Hong Kong

With my QSL card from VS6UP came some news of happenings along the southern coast of China. There is a mass of information, and the following are some extracts from the logs of Hong Kong stations who worked as follows.

19/2/89: 0940 9H1CG, 1815 YBØARA. 20/2: 1256 VK8ZLX. 25/2: 0856 PAØRDY, PE1EVX, G4UPS, G3KOX, PA3CII, PAØPKD, G4AHN, G3COJ, G3JVL, G3SED, G4JCC. F5QT, F6DOK and FC1 were heard working JAs to 1011. 26/2: 0822 9H1BT, 0836 9H1FL. OE1CIW heard.

10/3: 1524 817TT reported hearing VS6SIX, later worked 5H1HK at 1539. 12/3: 1244-1400 VKs 3AKK, 3AZY, 3HAY, 2WK, 4FN1, 4JH, 5LP, 5NY, 5RO, 3AKK, 3XQ. 16/3: 0700 5H1HK, also on 18/3. 22/3: VK4, VK6, VK8, YCØUVO. 23/3: 1447 4S7NMR, 4S7AVR, 1517 VQ9QM. 24/3: 0933 9H1B5, 9H1FL, 9H1GB working VK; 1226 P29PL, 1339 YCØFTE, 1416 VQ9QM, 1516 4S7ET. 25/3: 1129 5W1GP, 1420 JAs work KP4EOR on long path, 1456 VK8DA. 26/3: 1630 5H1HK and on 27/3 and 28/3.

QSL information: VS6CT - KA6V or JA4ENL; VS6DO - WA3HUP not K4CIA, VS6DX - WA4BCQ; VS6UO - G3IFB, VS6UP and XX9TDM - 1989 CBA not W7TIR; VS6WA - W7TIR; VS6WV - KØTLM; XX9CT - KA6V; XX9DX - WA4BCQ; XX9JN - KU9C, XX9KA - KC9V. The VS6 Bureau cannot handle cards for non-resident XX9s.

Chatham Island

Kerry ZL2TPY sends some information regarding his DXpedition to Chatham Island where he worked as ZL7TPY. He worked 41 call areas in 23 countries, and logged 830 QSOs on 50, 51 and 52 MHz.

Kerry said there was an element of risk going south for F2 DX, but he went, because there was no operating from ZL7, 8 or 9 for Cycle 22, and he could 'sleep' with the equipment for possible openings to Europe or Africa - but no luck.

Kerry said that most contacts to VK and ZL were via backscatter as the band opened and closed to the US. Only three openings to VK were beaming west.

Kerry says that the Chatham Islands are the last stop to nowhere - real old fashioned, with the 450 or so residents depending on the fishing season for a living. It can be very windy, so he limited himself to a five-element yagi, and the pole was aluminium with a 5mm wall thickness.

While on Chatham, Kerry tried RS10 and had 20 QSOs, using a TS700A and eight watts to a ground plane at five metres. He used an Eddystone receiver, which did not fine tune correctly, and this caused many problems. Worked ZL 1, 2 and 3 and heard VK2 and VK3.

11/4: 0509-0808 84 JAs; PJ9JT, 2042 N6XQ. 12/4: 2032 KP4A, 2250 KP4/KB8RO, then 7xW4, 25xW5, 20xW6, 1xW7. 13/4: 0906 JE2QJJ, 1929 ZL1AKW followed by 5xW4, 5xW5, 35xW6, 12xW7, XE1GE, T20JT, KG4SM. 14/4: 0034 N6VI, 29xJAs; 1854 KP4BZ, 9xW6, 2X27, KP4A, KP4EKG. 2200 KP4BZ; 2234 27xJAs then W5, W6, VK4FXX, VK4FXZ, VK4FNQ. 15/4: 0036 K6TQ, 27xJAs, 1911 2042 XE1GE, ZL1WOB, KP4BZ, KP4EOR, KP4EIT, KP2A, HI8WPC, ZL2KT, ZL2AGI, KG4SM, YS1ECB, XE1MD, FK1TS, 2T, W6, W7, VK4TUV; 2053 1xW5, 55xW6, 9xW7, VK4TUV; 2225-2259 VKs 2QF, 3OT, 3AKK, 3BQS, 3XQ, 3AUI, 4DO, 4TL, 4FXZ, 4FNQ, 4FXX, 5KK, 5ZDR, 5ZK, 5NY, 5RO, 5BC, 5LP, 7HL, 8ZLX, 8GF and at 2342 H44GP.

16/4: 0108 WA6BYA, 105xJAs, 0741 KH6HI, 0959 NI6E, 2034 W5OZI, KG4SM, WW4, 5, 6 and 7 for 13 QSOs, VK4FNQ, VK4BRG. 17/4: 0129 23xJAs; 1950 KP4A. 27xW5, 6, 7; 2148 XF4L, 2204 ZF1RC, XE1GE, VK4FN HI8WPC, VK4BRG. 18/4: 0036 19xJA, VK8ZC VK4BRG, VK5, VK8XX, VK8GF; 1917 W1FC/FS7, HI8WPC, KP2A, ZL1AKW, KG3SM, VK2, VK4, 2122 VP5D, 2130 8xW6, 7, 2243 ZF1RC, VK2. 19/4: 0043-0114 VK5s NY, ZK, ZDR, BC, AMK, RO, ACY, LP; Ø304 ZL7TZ; 2127 22xW5, 6, 7; 2158 V31PC. 20/4: 0028 VK4FNQ, 0236 JAs, 0814 JAs; 2053 W5FF. ZL1, 2; 2115 N6XQ, K6GMV; 2213 XE1GE, XE1MD, W6UXN, 2236-2348 VKs 4BRG, 5ZK, 3LK, 5DK, 5NY, 5LP, 4KJL, 5ZDR, 3MC, 5AAQ, 3QT, 3AOS, 8GF, 5RO, 5ZMJ, 5BC, 3CDI, 4RO. 21/4: 0010 VK3OT, 2034 ZK1WL, WA5LIG/6, 3D2ER, AD6C, N6XQ, K6JZK; 2305 VKs 3OT, 5NC, 5ZK, 5NY, 5LP, 5BC, 5ZDR, 5ACY, 5RO, 3DQJ, 5KAA, 5DK, 3NM. 22/4: 1909 W1FC/FS7, KP4A, HI8WPC.

Kerry said that he used an IC551D with an IC560 as back-up, five-element NBS-type yagi at 7m, and a Heathkit SB-620 Panadaptor scope. On 28.885 he used an Eddystone 1837/2 receiver with dipole antenna and a 12-volt battery supply. The station was maintained 24 hours a day for two weeks. ZL7TZ Tai-Rio had about 25 contacts to W5, 6, VK3, 5, using Kerry's rig during meal breaks.

ZL7TPY became the first ZL for 43 years to hear all six continents on six metres, when he heard the ZB2VHF beacon on 22/4.

Other highlights included the reception of the VP5D beacon practically every day, also Russian TV on 49.750 daily. On 19/4 at 2042 ZB2VHF beacon on 50.035 at Gibraltar was heard, and rose to S9+10dB at 2050, beaming long path at 165 degrees. OX3VHF beacon on 50.045 in Greenland was heard at 559 for five minutes on 21/4 beaming short path. On 22/3 Spanish FM on 50.020, 50.070, 50.100, 50.110 beaming north-east to east at 2100.

Northern Territory

It seems Peter VK8ZLX and Jeff VK8GF like trying for the impossible. Last month I reported on the two-metre contact to JA6GSW on 19 April. Latest reports suggest this may not be a distance record, and that Steve VK4ZSH may still hold that record. More details when to hand.

The other contact that these two were involved in was the contact I reported in the May issue, when VK8ZLX and VK8GF worked P43AS on the island of Aruba, off the coast of Venezuela at 2216 on 25 March. I did not realise it at the time, but it appears this distance is probably further than that originally set between VK8GB and 9Y4LL in Trinidad on 10/4/82 at 18665 km. The new distance is reported as being 18824 km. Congratulations! Now that Peter has sent Mike VK8ZMA to Darwin, the way may be open for spectacular contacts.

Radar

In May AR under that heading I made mention of the possibility of a proposed Civil Aviation Authority facility in the Mount Lofty Ranges being associated with Bureau of Meteorology wind shear radar.

Mr Chris Howell, Navigation Aids and Radar Engineer for the SA/NT Region, has written to say that the proposed facility will serve one purpose only - as an International Civil Aviation Organisation (ICAO) standard Secondary Surveillance Radar (SSR) * There is no association with the Bureau of Meteorology, or any other organisation, in establishing this facility.

Mr Howell says that the 'chirp' every 12 seconds which is experienced with audio and computer equipment in the vicinity of Adelaide Airport is caused by the 2 MW Primary Radar, and no interference has been recorded from the low-powered SSR installation.

"SSR operates on 1030 MHz transmit and 1090 MHz receive, had a peak power of 2 KW and a very low-duty cycle. The purpose of the facility, besides to determine aircraft position, is for the communication of identification and altitude data from the aircraft for display to air traffic controllers."

My statement in the May issue was in the form of an exploratory comment, and an answer to part of the query has been received as above. In the light of current media publicity regarding the selection of the Marble Hill site for the SSR installation, I can understand Mr Howell's concern that the SSR and Wind Shear Radar should be seen to be connected, and regret that my informant was incorrect, however, it would seem preferable for an incorrect supposition to appear in AR than the daily press.

I have been in touch with Mr Rod Potts and Dr Greg Holland of the Bureau of Meteorology in Melbourne, and they have informed me that the radar to be installed at Darwin is a Vertical Wind Profiler or Doppler Radar, and will be used to measure the vertical wind profile, as an aid to aircraft making final approaches to primary airports. The unit will operate on 49.920 peak power of 40 kW (average power of 2 kW) and will transmit pulses of two to 16 microseconds, at a pulse 100 metres wide. One signal will be transmitted vertically, and two other signals at an angle of 15 degrees in an east-west and north-south direction, and the signals may be varied according to requirements.

Dr Holland said that the frequency had been selected in preference to 90 MHz, due to the increased penetration of the ionosphere at the lower frequency. Channel 0 interference had been considered, but appeared not to be a problem at Darwin. There was more concern for interference to a nearby military installation.

Dr Holland said that he believed there was a similar installation at Adelaide on 50 MHz, using a phased array antenna, and there appeared to be no reports of interference. So far, I have not been able to confirm the existence of such an installation.

EME Contacts

No doubt partly due to six-metre signals becoming scarce, amateurs were able to turn their other rigs on and achieve some notable contacts.

For some time, Mick VK5ZDR, has been hearing Dave W5UN during his EME skeds with other stations on two metres. Finally, with the help of others on 28MHz, Mick was able to arrange a sked with W5UN on 11/5/89. At 0300 Mick successfully completed a two-way contact with Dave with O and R reports. Mick did not

* *See full text of Mr Howell's letter p58.*

have the advantage of a mast-head amplifier.

It was a particularly important contact for Mick for two main reasons that of being his first EME contact, and his first contact on the air using CW! Mick spent some days brushing up his code skills and, although understandably hesitant at first, succeeded with a two-way contact at his first attempt. Good work!

Two other stations which also achieved their first contacts via EME were Roger VK5NY on 13/5 at 0440 with O and R reports to W5UN, and Garry VK5ZK.

VK5LP will have to wait until the mast-head pre-amp is repaired!

From Western Australia comes news that Don VK6HK had an EME contact with W5UN on 30/4/89, for a possible first for two metres in Western Australia.

Other News

I note from the West Australian VHF Group Bulletin that Canadian amateurs are in serious danger of losing the entire 220 MHz band, and possibly the 440 MHz band.

QSLs received by VK5LP include ZF1RC, KX6DS, XE1MD, W5UWB, WA6BYA, YVØUVO, VS6UP and VK3OT

Martin Haasen OY7ML, of the Faroe Islands, sends a card confirming that at present no six-metre operation is permitted from OY. OY9JD had made several crossband 10/6-metre QSOs, and has applied for a six-metre licence, but this may not be available until September/October [illegible]

QSL routes: VP5D to W3HNK; ZF1RC to Roger Corbin, PO Box 1549, Cayman Islands, West Indies; 5W1GP to PO Box 1625, Apia, Western Samoa.

Closure

Mid-winter provides a period for possible Es contacts on six metres, and operators should not overlook this fact.

Closing with two thoughts for the month: "Painting is the art of protecting flat surfaces from the weather - and exposing them to the critic", and "Don't be afraid to ask dumb questions - they are more easily handled than dumb mistakes"

73 The Voice By The Lake.

BT

Try This - .

Graham Muirhead VK4WEM advises that tea chests, suitably reinforced, can be stacked to make useful cupboards. They can be stacked in any configuration, but he recommends a maximum stack height of four chests.

POUNDING BRASS

IARU Region 1 : High Speed Telegraphy Championship

Gilbert Griffith VK3CQ
7 Church Street
Bright 3741

The 2nd IARU Region 1 HST Championships will be held at the DARC Interradio Exhibition at Hanover from 10th to 12th November 1989. Invitations have been sent to all Region 1 national societies to send team to take part in this event. For the first time, as reported in MM9, there is also an Open Class competition for "all-comers".

Each national team may comprising 3 to 6 members, with no more than 2 senior males (over 18 years); 2 senior females; one junior male (up to 18 years); and one junior female. Each team will have a teamleader, who may or may not be a competitor; a trainer; and an interpreter, and the team may also be accompanied by an HSC International Class Referee serving as a member of the International Jury.

The Open Class competition has four categories :-

(a) "Youngsters", up to 15 years of age
(b) "Juniors", up to 18 years
(c) "Seniors", older than 18 years, and
(d) "Veterans", 46 years or older

The Tests

The Championships consist of two competi- [illegible].

The HIGH SPEED competition comprising four tests, each one of one minute duration:

1 Reception of letter messages
2 Reception of figure messages
3 Transmission of letter messages
4 Transmission of figure messages

Each reception message is sent at progressively higher speed with competitors withdrawing as the speed becomes too high for them. Any form of writing or symbols may be used to record the messages, but the formal entries must be re-copied onto an official form in capital letters.

The transmission messages are given to competitors a day in advance. Two-letter messages and two-figure messages are provided, and a contestant may attempt each test twice by using the different messages, declaring the better attempt to be his/her entry for the test.

The OPEN CLASS competition comprises three tests:

1 Reception, with copying, of mixed text messages (letters, figures, and punctuation marks) during a period of three minutes, and reception, with copying, of open English text during a period of two minutes ;

2 Reception, with memory copying, of three open English text messages, each containing about 100 characters ,

3 Transmission of mixed text messages during three minutes, and transmission of open English text during two minutes.

Competitors in the Open Class competition having more than five errors in a received message are required to resign. The use of a typewriter is allowed.

In the memory copying test, competitors are allowed three minutes after each transmission to write down the text received.

In the Open Class, only one transmission attempt is allowed, and the number of corrections is limited to five.

Keys Allowed

Straight keys or electronic keys (single or double paddle) are allowed. Electronic keys shall produce dots and dashes in the ratio 1:3 Electronic keys with additional adjustments or with memory systems, capable of transmitting messages automatically or semi-automatically, or keyboards, may not be used. Electronic keys used shall be powered from 220 volts AC and their output must be capable of activating a polarised electromagnetic relay.

Entering the Championships

There is a very short time-scale to allow national societies to select their teams, unless they have begun to make their arrangements in advance Anyone interested in taking part in either the team evens or the Open Class should contact their national society *immediately*.

The results of the 1st IARU Region 1 HST Championships, held in Moscow in 1983 are inside the back cover of MM9 so that prospective competitors can see the level of performance they need to achieve. If any reader of Morsum Magnificat attends or takes part in the championship please send a report to me (and me, Gil) ASAP so that the details of the results can be included in an early issue of MM (and PB)

Please Note

The above information is a very brief summary of the rules for the HST Championships and should not be treated as an official description of the Championships. It is taken from Morsum Magnificat #12, and I doubt the the WIA have been notified I suggest that prospective competitors contact Colin Turner G3VTT Hurley, Weavering Street, Maidstone, Kent, ME14 5JJ, UK.

Although I manage to get hold of most Morse-related literature, I am unaware of any similar competition for Region 3. Any reader input would be appreciated in the form of information, or proposals for a national or regional competition.

Continued page 34

Huge Savings on the FT-767GX All Mode Transceiver!

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D-3300

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Save $100

With Bonus

D-4207 2m 5/8λ antenna
D-4030 70cm Co-linear antenna

DICK SMITH COMMUNICATIONS

From page 31

Don't forget that subscriptions for Morsum Magnificat are available from Tony Smith, 1 Tash Place, London, N11 1PA, UK, for £7.50 sterling surface mail, or £9.00 sterling air mail.

Readers may remember that I featured the Howes transmitter kit from Dick Smith Electronics back in December 1988. I have, waiting for assembly in my file, both the Howes CVF80 VFO kit and the DcRx80 receiver kit. I hope to feature each kit in the column as soon as possible. They are available on "special" at the moment, so perhaps you would like to grab one even before you read the articles. The transmitter is working very well, as it has from the very first switch-on, with no sign of chirp or drift. I even plugged my homebrew VFO into it with excellent results.

73's Gil VK3CQ

ar

WIA 80 Logo Competition

The world's first and oldest national radio society will soon begin celebrating its 80th birthday.

A part of this celebration will be the creation of a logo. We need your ideas on paper. WIA members, their family or friends can submit logo designs.

The WIA 80 logo must include the familiar standard WIA wings emblem. It should also clearly give the message that the WIA was founded in 1910, or 80 years ago.

A judging panel will review all entries. It will have the right to chose any design submitted, parts of one or more entries, or simply use the entries as inspiration to create a logo.

Entries close on August 14, 1989. They should be sent to: WIA 80 Logo Competition, Wireless Institute of Australia, PO Box 300, Caulfield South, 3162.

AMSAT

AMSAT Australia

Maurie Hooper VK5EA
11 Richland Road
Newton 5074

National Coordinator:

Graham Ratcliff VK5AGR

Information Nets

AMSAT Australia
Control: VK5AGR
Amateur check in: 0945 UTC Sunday
Bulletin commences, 1000 UTC
Primary frequency: 3.685 MHz
Secondary frequency: 7.064 MHz
Amsat SW Pacific
2200 UTC Saturday, 14.282 MHz

Participating stations and listeners are able to obtain basic orbital data including Keplerian elements from the AMSAT Australia net. This information is also included on some WIA Division Broadcasts.

Latest Satellite News

AO-13 Transponder Schedule Update (from VK5AGR)

14 May 89 to 14 June 89 Model-JL from MA 160 to MA 200 ! Mode-B from MA 200 to MA 160. Also, for a trial period the omnidirectional 70cm antenna will be connected to the Mode-B receiver from MA 20 to MA 40. These changes have been introduced to enable stations who have access around perigee to experiment with perigee operation. Mode S unchanged. 14 May BLON/BLAT 212.0/+2.4 with a drift rate of 0 016/-0.061 deg/day, respectively

Date:	14 Jun 89-16 Aug 89	16 Aug 89-15 Nov 89
Attitude:	180/0	210/0
Mode-B:	MA 0 to MA 1100	MA 3 to MA 160
Mode-JL:	MA 110 to MA 145	MA 160 to MA 200
Mode-B:	MA 145 to MA 255	MA 200 to MA 240
OFF:	%	MA 240 to MA 3
Mode-S:	MA 150 to MA 160	MA 210 to MA 222

Transponders will be in operation during the whole orbit from June 14 until August 16 due to excellent sun angle and power budget. No perigee operation between August and November due to perigee solar eclipses!

MICROSATs Launch Set for November 9, 1989

Arianespace officials have now informed AMSAT-NA that the launch of the MICROSATs (and Uosats D and E) has been "pushed back" and is now pegged for November 9, 1989. This particular mission in which the MICROSATs will fly on is commonly referred to by the French as a "call-up" mission. It is called this because the primary payload, the SPOT 2 earth resources/photo-reconnaissance satellite, which is being launched, is to replace the ageing SPOT-1, which has been operational for several years [redacted]

DOVE MICROSAT Downlink Frequency Changed to 145.825 MHz

Originally DOVE (Digital Orbiting Voice Encoder) was designed to use 145.970 MHz as its voice downlink frequency. However, after consultation with AMSAT officials, a decision was made to change it to 145.825 MHz, in order to maintain "commonality" with previous amateur radio, "scientific and educational" amateur radio satellites, that *is*, UO-9 and UO-11. From analysis of the projected DOVE orbit, it was found that the potential for mutual interference between DOVE and UO-11 was minimal. Also, it was pointed out that many schools had previously acquired simple FM receivers, which were crystal controlled and only operated on 145.825 MHz. Therefore, it was BRAMSAT's desire to see this "commonality" maintained, and so the DOVE downlink frequency was changed.

"The First Flock of Microsats" Part 4

Flight Computer Module

Each MICROSAT contains a general purpose microcomputer, for command and control purposes, and for digital data management. The computer is responsible for ensuring that all spacecraft functions are properly carried out. It performs the following tasks, among others :-

- Battery-charge regulator set-point control
- Telemetry measurement or calculation and [redacted]
- Transmitter power level selection and scheduling
- Command reception and decoding
- Telemetry packet or data initiation
- AX.25 protocol implementation, transmit and receive
- Text output to the speech synthesizer or digital sound output to the digital to analog converters on DOVE
- Picture data handling on WEBERSAT
- Bulletin Board store-and-forward user services on LUSAT and PACSAT
- "Watchdog" operation to reset the computer, if no commands are received in a certain period, or to reduce transmitter power output, if the battery voltage becomes un-

acceptably low.

The flight computer is a customer design based on NEC V-40 microprocessor. Three primary memory areas are supported. For executable image storage, 256K bytes of RAM are implemented with Error Detection And Correction (EDAC) hardware, employing twelve bits per byte, eight data bits and four check bits. A 2K byte ROM boot loader is non-volatile, and provides a means of safely restarting the flight computer from a hard reset. User messages, telemetry mass storage, voice, picture, or other data are stored in a nominal two megabytes of RAM, which is accessed in half megabyte switched memory banks. Up to eight additional megabytes of RAM may be accessed as a serial-interface mass storage medium. Half megabyte memory banks may be individually powered down, in order to conserve spacecraft power when the memory is not in use.

A single 8 bit analog to digital (A to D) converter in the computer measures voltages on a pair of bus lines reserved for analog measurements. This provides the means for the flight computer to monitor operating parameters throughout the spacecraft, for telemetering and operational purposes.

On-board programs are managed by the Quadron Multi-tasking operating system, which looks similar to MS-DOS to each of the running applications. This approach is used, in order to greatly simplify ground based software development on existing PCs.

Telemetry will be encoded from A to D measurements, and logically organised into 32 or more channels within software. The proposed telemetry to be monitored includes at least :-

Channel No (ref. LUSAT or PACSAT)	Parameter	Module No
00	TX PA Temperature	01
01	Base plate Temperature	01
02	Tx RF Power Output	01
03	Mod 02 (Unassigned)	02
04	+X Array Current	03
05	-X Array Current	03
06	+Y Array Current	03
07	-Y Array Current	03
08	+Z Array Current	03
09	-Z Array Current	03
10	Total Batt. Load Cur.	03
11	Total 7.5 V Bus Cur.	03
12	Total 5.0 V Bus Cur.	03
13	Battery Voltage	03
14	7.5 V Bus Voltage	03
15	5.0 V Bus Voltage	03
16	BCR Input Voltage	03
17	Batt. Cell #1 Temp.	03
18	Batt. Cell #5 Temp.	03
19	-Y Array Temp.	03
20	Flt. Computer Temp.	04
21	RX #1 Sig Level	05
22	FX #1 Freq. Offset	05
23	RX #2 Sig. Level	05
24	RX #2 Freq. Offset	05
25	RX #3 Sig. Level	05
26	RX #3 Freq. Offset	05
27	RX #4 Sig Level	05
28	RX #4 Freq. Offset	05
29	RX Mod. Temperature (Top Plate Temp.)	05

The -Y array temperature is of interest, because the -Y array covers the side of the MICROSAT containing the electrical bus channel. This parameter also provides a backup source of spacecraft spin rate information.

Other calculated or derived parameters to be included in the telemetry selections are :-

- Total Array Current
- Total Power Output from Solar Arrays
- Total S/C Load Power
- Number of RX Channels Active
- Downlink Serialized Frame Number
- Uplink Serialized Packet Number
- BCR Solar Voltage Set Point
- Battery Voltage Set Point
- UTC Clock and Date
- Current Satellite Keplerian Elements
- S/C in Sun/Eclipse
- Battery Charging/Discharging (since last frame)
- Battery Charging/Discharging (over last orbital period)

This list is to be expanded further.

Use of a flight computer, so intimately connected with spacecraft functions and mission, allows unprecedented opportunities for statistical and scientific data collection and on-board processing. The quantized, and fully identified nature of packetized information, will allow the flight computer to determine and analyse usage geographically, and to monitor trends. This data will be useful to mission operators in maximizing satellite performance and data throughput through schedule, operating parameter, and protocol adjustments and experiments.

FSK Packet Receiver Module

LUSAT, PACSAT, and WEBERSAT all contain digital receivers that operate on four channels in the amateur 2 m satellite bands (144.3 - 144 5 and 145.8 - 146.0 MHz.)

Each of the uplink channels may be set independently to receive FSK uplinks, at either 1200 or 4800 bits per second, by the flight computer or from ground command.

At both speeds, the uplink bit stream is Manchester encoded, NRZ-I, HDLC, and used to frequency shift a carrier at the channel frequency. At 1200 bps the bandwidth of the uplink signal is approximately 4 kHz. At 4800 bps, the uplink signal approximately fills the entire 14 kHz channel. As noted above, satellite telemetry contains uplink frequency offset and signal level information, which can enable users to adjust their uplink freqency for best perform-

A low noise amplifier, a dual gate MOSFET device (MRF-966) and a highly selective 3MHz band-pass filter, comprise the front end of the receiver. The filter is required to protect the receiver from strong out-of-band signals. A double conversion heterodyne scheme, with a first IF in the vicinity of 40 to 50 MHz, is then employed. Mixers are 40673s. Power dividers are used after this IF to split the receiver channels before conversion to the second IF at 10.7 MHz on four separate IF strips. These strips are nearly entirely implemented using Motorola MC3362 FM receiver integrated circuits. Each receiver channel finally demodulates the audio tones to produce a NRZ-I or Manchester serial data stream (depending on what was sent) that is decoded with clock recovery and used by the flight computer.

Amateur radio stations will be able to connect to the mailbox satellites (PACSAT and LUSAT) at various functional levels governed by appropriate software verifications. Stations authorized to perform BBS and engineering housekeeping will be responsible for short and long term satellite health, mission efficiency, and observance of regulations governing the amateur satellite service. Functional levels are as follows :-

- 0 - The ability to request particular elemetry information (all users)
- 1 - The ability to upload broadcast bulletins
- 2 - The ability to do forwarding BBS housekeeping
- 3 - The ability to configure telemetry functions
- 4 - The ability to change spacecraft operating parameters
- 5 - The ability to re-boot/reload the computer

Each ground station with special access also has all lower level capabilities by default. Command stations operating at levels 4 and 5 must utilize a ground base engineering test model of the MICROSAT, for thorough software verification, before loading the actual orbiting computer.

Standard AART

Each module in each MICROSAT, except the flight computer itself, will be attached to an AART (Addressable Asynchronous Receiver/Transmitter) board, a simple, standardized CPU-to-module interface for command (both discrete digital and analog multiplexer) data, by the use of a three wire bus (transmit, receive, and common) which uses ordinary ASCII communications at 4800 bps. An identical PC board is used in each module (aside from the Flight Computer Module) to provide these command functions.

The inter-module electrical interface is a 25 wire bus. Each AART board provides the mechanical mounting for the DB25 connector on each model. Wires on the bus include +5, +7.5 and +10 v. DC module power, an analog pair from the modules to the A/D converter, various discrete control lines and mission specific signals, and the 4800 bps AART data.

For each module the AART provides: 24 discrete bits for module control; a 4 way conditioned thermistor multiplexer; and 9 bit multiplexing for analog telemetry ports. The board is based on the Motorola MC14469 AART chip.

Analog data sampling devices are designed to relinquish the bus, so as not to interfere with measurements from other points. Analog measurements are made one at a time via the A/D converter in the Flight Computer Module.

Spacecraft Antennas

There are two sets of antennas on each satellite; one for transmit, and another for receive. For LUSAT, PACSAT, and WEBERSAT, the 70 cm (437 MHz) transmit antennas are a set of four radiating elements mounted on the -Z surface (the face nearest the launcher while

attached) These form a canted turnstile and, when properly fed, produce a circularly polarized signal along the Z axis. The antenna elements are made of flexible, springy, semi-cylindrical metal, approximately 1.0 cm in width, similar to ordinary tape-measure blade material. This arrangement will ensure that no nulls are produced by the antenna, even for users with linearly polarized antennas. In general, very strong downlink signals are provided to the user community.

The DOVE uses a 2 m (145 MHz) canted turnstile, made of the same material and mounted in the same way, producing similar performance.

For LUSAT, PACSAT, and WEBERSAT, the 2 m (145 MHz) receive antenna is a whip made of blade material mounted on the +Z surface of the spacecraft. This antenna will be a quarter wavelength or more long, as dictated by good loading and RFI practice. It has a linear polarization pattern. It is anticipated that transmitted uplink signals will be circularly polarized, making the link less sensitive to spacecraft orientation, but incurring a 3 dB penalty over the most favourable matched-polarization case.

The WEBERSAT contains a third antenna, for L band (1265 MHz) uplinks, probably a quarter wave whip mounted on or near the camera module.

MICROSAT Thermal Characteristics

The thermal (heat transfer) characteristics of MICROSAT are designed specifically for low earth orbit (LEO) operation. Spacecraft coatings are designed to minimize heat inputs from the sun, earth and earth reflection radiations. The objective is to keep the spacecraft temperatures low (in the -5 to +5 C range), in order to promote as high an efficiency from the solar cells as is possible. Long lifetime of the Nickel-Cadmium storage cell batteries is also enhanced by the lower temperatures.

Spacecraft Attitude Control

The attitude of the satellites will be controlled by means of a passive magnetic technique. The spacecraft frame will contain four small permanent magnets, aligned parallel, with their north poles directed in the +Z direction. This will cause the satellite Z axis, while the polar orbit, to rotate twice per orbit, as the magnets "track" local geomagnetic field lines.

The satellite will be caused to rotate about the "stabilized" Z-axis, by making use of four solar torquing vanes, and several hysteresis damping rods. The four blade elements, forming the turnstile antenna, will each be painted white on one side and black on the other. At any instant, at least one black surface, and one white surface on the opposite side will be exposed to solar photons, resulting in a net solar photon torque about the Z axis. The differential transfer of linear momentum of photons, colliding with the white surfaces and the black surfaces, will cause a net rotation about Z. The rate of rotation will increase until equilibrium occurs between this torque, and hysteresis damping caused by a series of small steel rods oriented parallel with the X-axis. Energy damping occurs as the lossy iron rods cut the earth's magnetic flux lines, which are parallel to the spacecraft Z axis, as discussed above. The resultant rotation rate is expected to be between one rotation every minute, and one rotation every four minutes. The purpose of the rotation about the Z-axis is to eliminate thermal gradients that would otherwise build up across the spacecraft, particularly in the X-Y plane.

The receive whip is painted black on both sides, and does not apply appreciable torque to the spacecraft mass.

This technique was used very successfully on both the AMSAT-OSCAR 7 and AMSAT OSCAR 8 spacecraft missions. ar

EDUCATION NOTES

DOTC Question Banks

Brenda Edmonds VK3KT
c/- Executive Office
PO Box 300
Caulfield South 3162

Firstly, I must explain the above for those who have read thus far. At the time of writing, we are in the process of moving from Frankston to an as yet undecided location in Melbourne's eastern suburbs, so for the time being, if you wish to reach me, please write care of the Executive Office. I will be in close touch with the Office to collect mail as required, and will publish a new address as soon as possible. The change should be effected in time to be corrected in the new Call Book. (Have YOU checked to see that YOUR Call Book information is correct? Remember to notify the Executive Office of any alterations necessary.)

Moving house is a bit like entering for a licence exam. Once the initial decision is made, there is a certain amount of inevitability about the subsequent events. Once the packing begins, each item poses a question with four possible answers - Should I,

(a) keep it ;
(b) throw it out ;
(c) give it away ;
(d) put it in the "too hard" box.

Would anyone like a very large "too hard" box?

On a more serious note, I recently received a draft copy of the DOTC examination theory Question Banks, and a computer disk containing the program for generating Morse code.

From the time the idea of distributing the Question Banks was first mooted, the WIA has urged that we should be allowed to view and comment on them before their release, so that any disagreements about level or content could be discussed, and the banks could be released with a "WIA seal of approval". I was not expecting to receive them until about mid-July, but at the Convention I discussed with the Divisions how we intended to handle them.

We think it is important that all Divisions have an opportunity to view the questions and comment on them, so a meeting of Divisional representatives has been arranged, at which we will consider the questions as such, the balance of questions in each bank, and the presentation.

Because of the size of the banks (over 100 pages each), and because I made a commitment to DOTC not to allow them out of my control, I have not sent copies out in advance. I have, however, had each bank read and criticised by at least four experienced people, and have collated their comments. Questions which attracted comments from two or more readers have been copied and distributed to the Divisional representatives for consideration.

The readers agreed that most of the questions were fair and acceptable. Of the AOCP bank, only about 50 were of doubtful validity. It seems likely that after some minor modifications are negotiated, the banks will be acceptable to all users without any further amendments. It is highly desirable that, at least at first, all intending examiners use the questions from the bank without alteration. I will pass on information about further developments as they occur.

The Department's intention is to release the banks, both as a booklet and on IBM compatible disk, with a program for automatic generation of whole exam papers.

We have not yet had the opportunity to examine the paper-generating program, but hope to have a copy of it soon, also.

The Morse code disk has also been tested by a small group of enthusiasts, who are preparing reports. I will publish their comments later.

The Regulations question bank will not be available for some time yet, as the three brochures are not yet finalised. At this stage, they will not be ready in time for the August exam, and probably not for the November one either. Notice will be given in AR and in broadcasts when it is intended to start examining on the new brochures.

For any further information about examinations, please contact me, or your Divisional Councillor, who will be in close touch with the representative who attends the Question bank meeting.

It is very pleasing to have some action at last on devolvement. I hope those who were originally enthusiastic and energetic have not lost interest. We now have a chance to provide a faster and more efficient service to our future members. Let us make the most of it.

73, Brenda VK3KT ar

HOW'S DX

Marion Island and others

Patrick Kelly VK2RZ
PO Box 41
Ourimbah 2258

It was good to log Peter ZS8MI after he turned up unexpectedly on the ANZA net. Although reports from VKs and ZLs who had worked Peter were numerous, there were still a lot of nervous DX types who had been getting a little anxious. Circumstances can change, and early contacts are important, 4W0PA was a good example.

Peter is more active than information given prior to his arrival had indicated. Working frequencies are varied, except for 10 metres, where he is regularly on 28 40 MHz around 0900Z, and 28 60 MHz around 1400Z. Logs are sent daily to ZS5E via Packet. QSL is OK via the bureau. Direct QSL to Peter Sykora, Box 1387, Vanderbijlpark, 1900, South Africa.

Banaba (Ocean Is)

After a week's delay, Jim VK9NS and Bob T3ØRA (KN6J) did manage their planned fortnight as T33JS. When Jim arrived on Tarawa, he found that equipment he had sent five weeks previously had not reached there. Then, to top this, the vessel which was to take them to Banaba was not available, hence the delay.

While on Banaba, Jim and Bob made 27000 SSB/CW QSO's on 160-10 metres, 150 on 6 metres as T33JS, and 826 contacts on RTTY using T33RA. QSL to HIDXA, PO Box 90, Norfolk Island, 2899.

Sable Island

When CY0SAB came on air in mid-May, band conditions were down. Daytime signals were only just audible and it was most frustrating listening to the North Americans and Europeans giving five-nine plus reports.

The best opportunity was on John KD0JL's net on 7 159 MHz, which is where most VKs and ZLs got through. QSL to VE1CBK.

St Peter and St Paul Rocks

Here was another tough one. The DXpedition here by the Natal DX Group occurred at the same time as Sable Island. With depressed band conditions, the route over Antarctica provided little joy in this part of the world.

Three callsigns were used, ZY0SS for SSB, ZY0SW for CW and ZY0SY for RTTY. QSL is direct to the Natal DX Group, PO Box 597, 59021, Natal RN, Brazil.

Malyj Vysotskij Island

When 4J1FS came up towards the end of May, first call contacts on 20 metres were the order of the day for VKs and ZLs. On 10, 15 and 40 metres, pretty much the same, even though signals were not strong. Last year's twenty-four hour operation left a lot to be desired, but it did put MV Island on the DXCC map. QSL to OH5NZ.

Chad

Alain J28CB is here for four months as TT8CW. He is only active as work commitments will allow, and I found him on 14.250 MHz at 0300Z with Zerdan JY3ZH on several occasions. QSL to F2CW.

San Andreas Island

A few stations who are active:-

HK0HEU-QSL to HK0FBF
HK0LIT-QSL to PO Box 362, San Andreas Is, Colombia
HK0EFU-QSL to K4TXJ.
HK0TCN-QSL to K4TXJ.

Vanuatu

Local operator from Port Vila, Norman YJ8JS (previously YJ8NJS) was on Motalava Island in the Banks Islands for five days as YJ1BKS. He told me that this was the first time that any amateur had operated from here in forty or so years. This DXpedition was mainly of interest to those chasing British Commonwealth and IOTA awards.

Norman had also intended going to the Torres Group, but poor weather conditions prevented this. By the sound of the rain on the roof of his shack, it sounded just like home. QSL to G0CGL.

Two JA's who were in Vanuatu recently were YJ0AMI-QSL to JL1RUC and YJ0AKS-QSL to PO Box 34, Tama, Tokyo, Japan.

Chagos

There are two operators on Diego Garcia that have been heard around the bands in recent months. Larry VQ9LW-QSL to WA2ALY and Joe VQ9ZZ QSL to W1HZZ Via Bureau Only.

Egypt

From Moadi, John SU1EK operated around 21 200 MHz from 0100Z, and on 10 metres he could be found on 28 5632 Mhz and 0630Z. QSL to W2OUV.

Eastern Carolines

I had not heard of Nishi KC6IN on Ponape Island until he suddenly appeared on 15 metres one day. He is resident there, so hopefully we may hear more from him. QSL to callbook address.

Johnston Island

Curtis KB5ENR/KH3 is still active. It has been some months since he was last heard, so I did not mention him in my previous report. QSL to KA5WOO.

Antarctica

This continent, for DXCC purposes only, counts as a single country, but offers a variety of prefixes for the DX'er. CE9, FB8Y, KC4, LU, VK0, VP8, ZL5, ZS1, 3Y, 4K1 and 8J1 are usually used, although variations do occur, particularly with the French allocations.

Of further interest is that Antarctica is included in the continents of South America, Oceania and Africa for the WAC Award. For WAZ, the seven zones of 12, 13, 29, 30, 32, 38 and 39 can be worked here.

At present, there are three stations down there you should be looking for.

Casey Base has Roman VK0MP and John VK0JV, and at McMurdo Station there is Tom KC4USV.

This last callsign is available to US personnel stationed there, so check the QSL route with the operator.

In the Antarctic for last winter's season were Robert FT5YB at Dumont D'uraville Station, Allen ZL5BKM and Sojo ZL5BA at Scott Base. All three were very active, until they were rotated out in December last.

QSL routes for the above are :-

VK0MP to VK6AGC
VK0JV via the VK2 bureau. Cards will not be available until early 1990
KC4USV to Tom O'Brien, PO Box 100, Code 50, NSFA, Det, McMurdo, FPO, San Francisco, CA, 96692-1000
FT5YB to F6ESH
ZL5BKM to ZL2HE
ZL5BA to KB4GID

Marshall Islands

Most of the activity from here is on Kwajalein Island which is at the wrong end of a missile testing range. The operators are usually US military personnel with their own callsigns, and it is important to obtain QSL information from them. Visiting operators can use the club station KX6BU. For these contacts, you can QSL to the Kwajalein Amateur Radio Club, Box 444, APO San Francisco, CA 96555, USA.

On Majuro Island, Donna KX6MU and her OM Dave KX6DU have been there for ten months of a two year stay. QSL to PO Box 748, Majuro Island, Marshall Islands.

Monaco

I worked Alex 3A/IK5DVV for a new country on 21.267 MHz at 0151Z. From the size of the pile up, it was obvious that I wasn't the only one who needed this one. QSL to Alex's homecall.

Gibraltar

Here was another good one, this time on ten

metres. Ernie ZB2FK came up at 2300Z on a pre-arranged schedule, and obliged quite a few stations in the short time he was able to stay. QSL to Ernie Stagnetto, 74 Kingsway House, Red Sands Road, Gibraltar

Gabon

Christian TR8SA continues to operate at weekends. One band you are sure to find him on is 10 metres, if you look around 0700Z-QSL to F6FNU (no Greenstamps - 2 IRC's required.)

Belize

Don V31PC has now expanded his activity to 6 metres. He managed to pick up a ten watt National rig, and has a three element yagi that was donated by SM1RK to improve his signal into the States. He has also been able to work quite a few VK and ZL stations on this band.

On 10 and 15 metres, Don usually appears around 0130Z, and prefers to rag chew rather than hand out signal reports. So, if you do manage to come across him, keep this in mind, and only call when he completes his QSO. QSL to Don Owen-Lewis, PO Box 7, Punta Gorda, Belize. Greenstamps for postage are preferred.

Rotuma

There was more activity here this time from Yama 3D2YY. Not too much was heard from him, but if you did manage a contact, you can QSL to JH4IFF.

Cyprus

While turning around on 20 metres, I came across Andy with a special callsign C4GSC/XA/A. He never gave me the chance to enquire about the significance of his call or the occasion. When someone asked if he was in Mexico, he did give a negative response, however. The QSL route was to PO Box 5589, Limassol, Cyprus. Having to give this as well as his callsign, I could see why he was not using CW.

Perhaps the most active operator from Cyprus is Mike 5B4TI. Most times he can be found around 14.200 MHz, but lately he has been on 10 and 15 metres from about 0500Z. He is in big type in the callbook or you can QSL via the bureau.

Mike reports that there have been serious problems with the mail due to disputes and he is still receiving Christmas cards! At present he has a backlog of 700 cards; so do not QSL again.

Algeria

Longpatch propagation to the Middle East on 10 and 15 metres is giving many VKs and ZLs plenty of opportunities around 2300Z and 0430Z. Boucif 7X4BL and Mohammed 7X4AN have both been very active lately. With only five watts PEP, and a three element tri-bander, Boucif is definitely QRP, which makes things even more interesting. For 7X4BL QSL to PO Box 929, Tlemcen, Algeria. The manager for 7X4AN is DJ2BW.

Morocco

Mike CN8MW has been active on 10 metres at 2300Z and 0630Z. I have worked him at both these times with very good reports. QSL to PO Box 162, Tangier, Morocco.

Kuwait

Another good one for 15 metres was Mohammed 9K2MJ. He was on 21.255 MHz at 0509Z with a 5/9+ signal, and is good in any callbook since 1986, or you can QSL via the bureau.

QSL Information

[illegible] Callbook

FK/JH6SOR Homecall

FS5DX WB7RFA
FS5T AI7B
T27YRA KN6J
T77T I0ERW
TG9GI I0WDX
UC1AWC UC2ABC
ZB2AZ Callbook or Bureau
A41KJ PO Box 741, Muscat, Oman
AP2ZA Azim M Zaidi, PO Box 4787, Karachi, 0223
HH7PV Patrick de Verteuil, Abricots, Jeremie, Haiti
HI1UD HI8LC (For Beata Is.)
HI9OCM PO Box 100, Salcedo, Dominicon Republic
JT1T Bureau or Direct to JT1KAA (Club Station)
LE3JP LA1K (Special call for Pope's visit June 2 and 3)
TA1AL Mustafa is the Bureau Manager
9K2KS PO Box 3181, Safat, 13032, Kuwait.

Stop Press

French DX Foundation has reported the deaths of Henri F1HJW and Marcel F2SA who had operated as 3V8AZ and 3V8VA in May. Their Cessna 182 aircraft crashed in the Pyrenees Mountains in Spain when returning from an aviation rally in Northern Africa.

It is requested that QSL cards not be sent until another route is arranged.

Courtesy QRZ-DX

Final Comment

On several occasions, DX stations have remarked to me about the courtesy shown by VK operators. This is as it should be, of course, but it is nice to hear..So use your full callsign whenever possible, when calling in pile ups, because it does help. Sometimes, DX stations will ask for the last two letters in your suffix to minimise QRM. Whichever way you do it, space your calls and listen, so you know what's going on.

Good DX!

ALARA

Overseas Visit

Joy Collis VK2EBX
PO Box 22
Yeoval 2868

I am gradually "coming back down to earth" after a most enjoyable trip to Canada and England.

One of the highlights was the opportunity to meet some of the VE7 ALARA members, Elizabeth VE7YL, Bobbie VE7CBK and Margaret VE7DKC, together with her OM, Al VE7KC.

It was a meeting that nearly didn't happen, because the plane was four hours late leaving Sydney, and during the flight I couldn't help wondering if they would still come to the airport as arranged, or give up the whole idea!

I need not have worried. The first thing I saw on arrival at Vancouver was a large computerised banner proclaiming "Welcome Dan and Joy". It was far too late for the supper we had

planned, so we settled for a cup of coffee and a chat at the airport. We managed to fit a great deal of talking into a very short space of time!

The following morning, Al and Margaret very kindly took us on a tour of Vancouver to see something of the city before we continued our journey to Edmonton.

I can truly say the warmth and hospitality of the Canadian friends, none of whom we had met before was a wonderful experience, and certainly exceeded all expectations.

Office Bearers 1989

At the Annual General Meeting held on air on Monday 22 May, the following were elected :-

President	Jenny Warrington	VK5ANW
Secretary	Meg Box	VK5AOV
Vice President/ VK5/8 State Rep	Maria McLeod	VK5BMT
Treasurer/Souvenir Custodian	Val Rickaby	VK4VR
Minute Secretary	Christine Taylor	VK5CTY
Publicity Officer/ VK1/2 State Rep	Joy Collis	VK2EBX
Awards Custodian	Mavis Stafford	VK3KS
Contest Manager/ Historian	Marilyn Syme	VK3DMS
Librarian	Kim Wilson	VK3CYL
Sponsorship Secretary	Gwen Tilson	VK3DYL
Editor/VK3 State Rep	Bron Brown	VK3DYF
VK4 State Rep	Josie Gleadhill	VK4VG
VK6 State Rep	Bev Hebiton	VK6DE
VK7 State Rep	Helene Dowd	VK7HD

We would like to extend a sincere vote of thanks to the outgoing Committee members, in particular, Marilyn VK3DMS, our President for the past three years

Marilyn has worked very hard to keep ALARA in the forefront of amateur radio activity, and has given unsparingly of her time and energy to achieve this goal

We would like to wish our new President, Jenny VK5ANW every success in her new position, and we are sure she will handle it as competently as she has handled the job of Secretary We would also like to welcome Christine VK5CTY, a new office bearer this year

To all who are continuing on with their present positions, or "changing hats", may the next twelve months prove rewarding for you

ALARA Contest and the Florence McKenzie Trophy

Novice YL activity for the Florence McKenzie Trophy was very disappointing during the 1988 ALARA Contest. It may not be generally realised that YL's with a "K" or "J" call (Novice/ Limited) are also eligible to compete. Not too early to start dusting down your key and brushing up on the CW for the next Contest, which will be held on Armistice Day, Saturday, 11 November this year

As a mark of respect, two minute silence will be observed at the beginning of the Contest, which consequently will start at 0002 UTC.

Murphy's Furphies

Murphy got busy with the results of the 8th ALARA Contest published in April "Amateur Radio".

Melva ZL4IO, was winner of the Phone Only Certificate. This fact was omitted from the list.

Second place in the Contest went to Joanne VK4CYL, not Aimee FK8FA.

Apologies to Melva and Joanne.

Membership List 31 March 1989

VK2ACP	Kathleen
VK2AMU	Betty
VK2BBM	Beryl
VK2CAK	Ree
VK2DDB	Dorothy
VK2DJO	Norma
VK2EBX	Joy
VK2HD	Heather
VK2MI	Joyce
VK2MV	Margaret
VK2PNG	Margaret
VK2PXS	Bobbie
VK2VCC	Chris
Jean Darling	
VK3AGO	Lorrie
VK3AYL	Rae
VK3BIR	Mavis
VK3BJB	Joan
VK3BRE	Mona
VK3BTU	Janet
VK3BYK	Barbara
VK3CWA	Margaret
VK3CYL	Kim
VK3DML	Margaret
VK3DMS	Marilyn
VK3DVT	Valda
VK3DYF	Bron
VK3DYL	Gwen
VK3FML	Marlene
VK3HD	Jan
VK3JAW	Marlene
VK3JQ	Liz
VK3KS	Mavis
VK3MCZ	Margaret
VK3NLO	Joan
VK3PBL	Bonnie
VK3PRV	Patricia
VK3PYL	Phyl
VK3UE	Clarice
VK3VAN	Jessie
VK3VBK	Joyce
VK3XBA	Kathy
VK3YL	Austine
Jean Truebridge	
Raedie Fowler	
Muriel May	
Jean Shaw	
VK4ANJ	Noela
VK4ANN	Anne
VK4AOE	Maraget
VK4ASK	Jill
VK4ATK	Connie
VK4BDH	Dulcie
VK4BET	Betty
VK4BSQ	Wendy
VK4CEK	Cathy
VK4CPL	Phyl
VK4CYL	Jo-Anne
VK4FAB	Anne
VK4KCA	Christine
VK4MAZ	Hazel
VK4NAM	Dorothy
VK4NNJ	Valarie
VK4PT	Pat
VK4PZ	Mary
VK4QW	Cecily
VK4VG	Josie
VK4VR	Val
Bonnie Pounsett	
VK5ANW	Jenny
VK5AOV	Meg
VK5BMT	Maria
VK5CTY	Christine
VK5LM	Lorraine
VK5QO	Marlene
VK5YL	Denise
Pauline Koen	
Bev Tamblyn	
VK6DE	Bev
VK6HI	Helene
VK6JMP	Joan
VK6NKU	Peggy
VK6OL	Trish
VK6PJL	Jan
VK6YF	Poppy
Olive Couch	
June Greenaway	
Lynda Francis	
VK7HD	Helene
VK7TN	Grace
VK8NXL	Rae
VK9NL	Kirati
CP5LE	Barbara
DF1LV	Christel
DJ1TE	Christa
DL2BCH	Gaby
DF2SL	Anny
DF3LX	Heidi
DK5TT	Margot
DJ6US	Walli
FK8FA	Aimee
JA1AEQ	Fumi
JH1GMZ	Akiyo
JJ1CAS	Hiromi
JI1VLV	Nanako
JE6JOC	Mizuyo
JA6KYP	Etsuko
JR5MVX	Masayo
K1IJV	Jean
WA1UVJ	Karla
KA1OKF	Cathi
W2GLB/7	Phyllis
WB2YBA	Christine
KA3CEO	Jeanne
W3CDQ	Liz
WA3HUP	Mary ann
WB3CQN	Ruthanna
WB3EFQ	Lois
WA4NRX	Merilyn
KA5ONE	Betty
KE5UO	Mary
KK5L	Carol
WD6FQX	Darleen
KA5WXE	Karen
KA6INK	Jerrie
KA6V	Joanie
KA6NZK	Elizabeth
KB6CLL	Mary
N6GGR	Maxine
N6GZW	Claudia
N6LFZ	Joanne
WA6OET	Jessie
KA7CRO	Martha
N7KEL	Jean
KC7TE	Daurel
KD7RA	Gerry
KD7SH	Alice
KD7YB	Joan
KQ7V	Shirlee
WA7TLL	Marion
WB7SUQ	Mary
KB8RT	Lee
KM8E	June
WD8MEV	Shirley
K9AXK	Ann
G3HCQ	Sheila
G4EYL	Ann
G4EZI	Diana
G4JMT	Rae
G4KFP	Jasmine
G4KVR	Cilla
G4OUZ	Joy
G4VBT	Sylvia
G4VRC	Dee
GØCCI	Angelika
GØEIX	Rita
Jeannette Arter	
GM4LUS	Shirley
[illegible]	Anne
GM6KAY	Kay
GWØARP	Jean
IT9KXI	Santina
OH3ST	Eeva
PA4ADR	Agnes
PA3DST	Paula
P29ZL	Jeannette
PY2JY	Inge
SM5HYL	Rozita
[illegible]	Raija
VE6AUP	Hallie
VE7YL	Elizabeth
VE7CBK	Bobby
VE7CIX	Rae
VE7DKC	Margaret
VE7LQH	Muriel
VR6YL	Betty
YJ8NJW	Junia
ZL1ALE	Aola
ZL1ALK	Celia
ZL1BBN	Win
ZL1BDZ	Clarrie
ZL1BIZ	Elva
ZL1BWQ	Ethel
ZL1BQW	Christine
ZL1CAV	Phillipa
ZL1FV	Gail
ZL1OC	Vicki
ZL1TDB	Margaret
ZL2ADK	Cathy
ZL2AGX	Dawn
ZL2AWP	Alma
ZL2AZY	Biny
ZL2BOA	Marilyn
ZL2BOD	Jeanne
ZL2BOX	Anne
ZL2PQ	Lynn
ZL2QW	Pauline
ZL2QY	Pearl
ZL2TZG	Gail
ZL2UKG	Gwen
ZL2VQ	Carol
ZL3GW	Val
ZL3VR	Anne
ZL4IO	Melva
ZS1YL	Lee
ZS5V	Mary
ZS5YO	[illegible]
ZS6GH	Diana
ZS6VCS	Pat

A Surprise for Mavis VK3KS

A surprise party was held at the home of Gwen VK3DYL to celebrate Mavis' (VK3KS) 50 years as an amateur radio operator

As Mavis later remarked, "it was a very well kept secret" Many YL's (and OM's) around the world knew about it, but Mavis was completely in the dark.

Present were 16 ALARA members, two daughters of members, and 6 OM's. Newly elected President Jenny VK5ANW and daughter Wendy travelled by bus from Adelaide, and city and country were represented.

Greeting cards came from Canada, England, USA and New Zealand, as well as from Australian amateurs. Lois WB3EFQ/VK3FYL who recently visited Australia arranged for a lovely corsage to be presented to Mavis from our three Pennsylvania members, Lois, Mary Ann WA3HUP and Ruthanna WB3CQN

The luncheon was delicious, including a beautifully decorated cake with the number "50" depicted on it. With plenty of food, talk and good company, the time passed all too quickly.

The highlight of the day was the presentation by Jenny, on behalf of ALARA, of the sheepskin rug for Mavis' radio operating chair. (No more cold shoulder, Mavis Hi!)

Congratulations, Mavis, and we all hope the sheepskin rug will be put to good use for many years to come

Award Update

No 147. 8 March 1989 Anna L Arnholt K9RXX 2 stickers

Canadian ALARA Members with Joy L to R· Elizabeth VE7YL, Al VE7KC, Margaret VE7DKC, Bobbie VE7CBK, Joy VK2EBX

There appears to be some confusion about the cost of the ALARA Award. Currently, the cost is $3 00 (Australian or equivalent), or 7 IRC's.

YLs at Mavis' Party. Standing L to R: Raedie, Bron VK3DYF, Kim VK3CYL, Margaret VK3DML, Gwen VK3DYL, Barbara VK3BYK, Marilyn VK3DMS,, Kathy VK3XBA, Phyl VK3PYL, Marlene VK3FML. Seated L to R: Bonnie VK3PBL. Mavis VK3BIR, Mavis VK3KS, Jenny VK5ANW, Jean. Photo: Alison Gray.

Bits and Pieces

Congratulations to Christine VK6ZLZ (President of VK6 Division), Cath VK3XBA (Federal Treasurer of the WIA) and Meg VK5AOV (Secretary of the Adelaide Hills Radio Society) on being elected to those positions.

For those unable to sleep, the net run by Christine GM5YMM on 14.241 MHz, at 1700 UTC is attracting some rare YL DX, including TA2YA, the only licensed YL in Turkey

Melva ZL4IO caught up with Maria VK5BMT and Jenny VK5ANW during a visit to Adelaide in May

We were pleased when Lois (WB3EFQ) came on the ALARA Net on 1 May with the callsign VK3FYL/4

Congratulations to Margaret Hamilton, now VK3MCZ and OM Tony, VK3MDA.

The VK6 ALARA Net is conducted by Poppy VK6YF on Mondays at 1200Z, (after the official ALARA Net) on 3.585 MHz All VK6 YL's are welcome to join in The VK6 monthly luncheons are also still being held. Please contact Poppy VK6YF for further information.

The VK3 Annual Birthday Luncheon will be held at the home of Raedie Fowler on Sunday 30 July Those interested in attending should contact Raedie or Bron VK3DYF for further details.

New Members

A warm welcome to new members -

Cathy KA0SNF
Marga DL2HBM
Anne VK4MUM
Joy VK4JOY
Sylvia VK4FPT and
Pam VK4PAM

Welcome back to Alma VK4YC (formerly VK4VAR) who has rejoined us

Until next month, 73/33, Joy. ar

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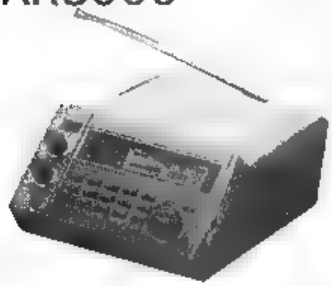

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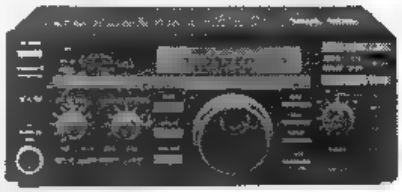

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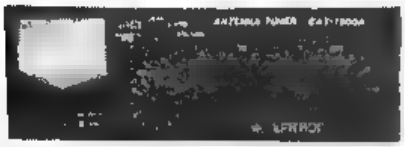

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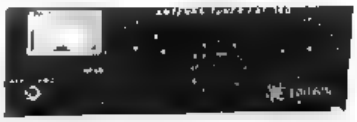

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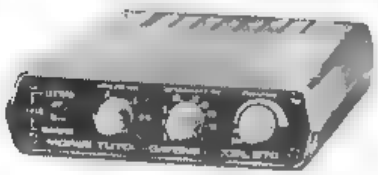

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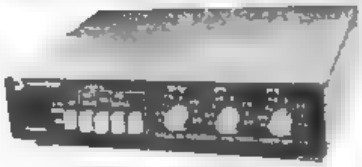

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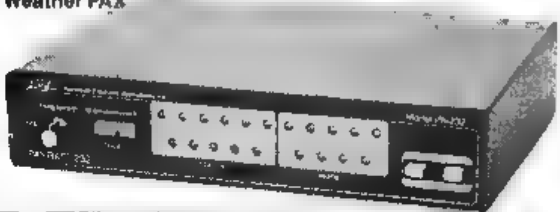

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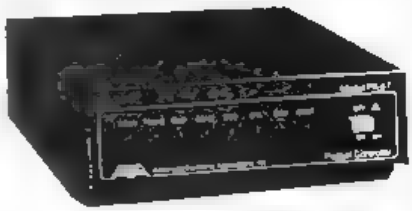

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Qld. 4120
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FAX: (07) 394 4316

WICEN

Announcing... WICEN NSW Inc.

Ian Nance
22 Truscott Street
North Ryde 2113

WICEN in New South Wales is now an incorporated association under the provisions of the Associations Incorporation Act of 1984. Incorporation was a requirement of the NSW Volunteer Rescue Association, of which WICEN is a member squad, and was agreed to by the NSW Divisional Council of the WIA.

One of the major reasons that the VRA required all rescue and specialist support squads to incorporate, was to protect individual squad members from any legal liability stemming from their operations.

The Act was introduced in NSW because of the previously limitless personal liability of members belonging to club-style organisations. Now, financial liability is limited to the extent of unpaid membership fees.

Incorporation took effect from 24 May, and later this month NSW members will receive a mail-out, giving full details of the new organisation.

In the meantime, it's important that existing financial members of WICEN are aware that their membership of WICEN NSW Inc is automatic.

Non-financial members will be invited to join.

Our incorporation is timely, in light of major changes to rescue and disaster planning for NSW, recently announced by the Minister for Police and Emergency Services, Mr Ted Pickering.

The management of WICEN NSW Inc is :-

President	Steve Boyd	VK2DNN
Vice President	Ian Nance	VK2BIN
Secretary	Peter O'Connell	VK2EMU
Treasurer	Tim Mills	VK2ZTM
Committee Members	Alan Boxsell	VK2YEQ
	Morton Williams	VK2DEX

ar

WICEN (South) Helps Derwent Clean-Up

Alan Widdowson VK7CI
29 Kingston Heights
Kingston Beach 7050

On 1 April, 25 members of WICEN (South), and co-opted operators, manned the western shore section of the communications network for the Day of the Derwent clean-up. The 2m repeater on Mt. Wellington was used to cover the 25 operating positions from Howden to New Norfolk.

The eastern shore section was manned by 20 member of the Clarence SES communications group and 8 members of the Crest organisation, giving a grand total of 53 operators.

A separate 2m simplex link was used to integrate the SES Hq at the eastern end of the Tasman Bridge with the WICEN Hq in the old Marine Board building near Constitution Dock.

Watches were opened at 0745am for checking and traffic immediately began to flow at a brisk rate which continued until after 2pm.

At least two "firsts" were chalked up for the day. One being the sheer size of the network, exceeding in numbers anything we have ever tackled before and secondly the fact that three distinctly different communications groups were brought together for the first time and without any rehearsal, functioned like a well oiled machine.

This, from the point of view of your co-ordinator, was the most rewarding aspect of the whole operation.

The experience gained in organising and running an operation such as this is invaluable, particularly when it turns out to be so successful.

The excellent work done by the network was greatly appreciated by the organisers of the Cleanup Day and my personal thanks go to all the SES, Crest and Wicen operators for a job well done.

ar

WICEN (South) Co-ordinator, Alan Widdowson at the controls of VK7CI Photo: Hobart Mercury.

CONTESTS

John Moyle, Ross Hull, Novice, RD and WAEDC Contests

Frank Beech VK7BC
Federal Contest Manager
37 Nobelius Drive
Legana 7277

Contest Calendar

July:	
1st-2nd	Venezuelan Independence Day Contest (rules last month) Phone section
1st	Adelaide Hills ARS Australian Sprint CW (rules May AR)
8th	Adelaide Hills ARS Australian Sprint SSB (Rules May AR)
16th	RSGB Low power field day (QRP operators delight)
29th-30th	Venezuelan Independence Day Contest CW section (rules June AR)
August:	
10th-20th	SEANET Contest SSB
12th-13th	WIA Remembrance Day Contest (rules this issue)
12th-13th	DARC European DX contest (rules this issue) CW section
September:	
3rd	LZ DX Contest (rules in August AR)
16th-17th	Scandinavian Activity Contest CW section (rules in August AR)
23rd-24th	Scandinavian Activity Contest SSB section (rules in August AR)
9th-10th	DARC European DX Contest Phone section (rules this issue)
October:	
8th	RSGB 21/28MHz Phone Contest
7th-8th	VK-ZL Oceania DX Contest SSB section (rules September AR)
9th	RSGB 28MHz Cumulative Contest
14th-15th	VK-ZL Oceania DX Contest CW section (rules September AR)
15th	RSGB 21MHz CW Contest

It is some time since the guidelines for all WIA contests were published, either in AR or in the Callbook.

Meanwhile issues raised by Ian VK5QX in his letter published in the May issue of AR have led to some uncertainty In an effort to clear the air, I am summarising the relevant sections of WIA contest guidelines Further on you will find the complete rules for the 1989 Remembrance Day Contest.

John Moyle National Field Day Contest

Object. To encourage portable operation on all bands by radio amateurs in VK and P2.

Frequencies Used: All authorised amateur frequencies except 10, 18 and 24 MHz.

Timing and Duration Held on a weekend in February-March for a duration of 24 hours; a six hour duration section is also included.

Scoring Philosophy Conducted in several sections encompassing field and home stations, single and multi-operator situations, CW, phone, HF, VHF and receiving classifications, with two time sections 6 and24 hours. Points scoring biassed towards field operation. Contacts outside entrant's call area, including foreign, are permitted.

Trophies and Certificates: Will be awarded at the discretion of the FCM.

Ross Hull Memorial Contest

Objects: Australian amateurs will endeavour to contact as many other amateurs as possible using frequencies above 30MHz.

Frequencies Used: All authorised amateur frequencies above 30MHz.

Timing: Held during the summer VHF/UHF propagation season from December to January for approximately three weeks.

Scoring Philosophy: Conducted in sections, eg experimental (all bands) and contesting (limited bands), phone, CW, and receiving. Scored on a basis of locator squares (Maidenhead system). Entries are submitted for a 7 UTC day (not necessarily consecutive), or a 2 UTC day consecutive period.

Trophies and Certificates: The Ross Hull perpetual trophy is awarded to the winner. Certificates will be awarded at the discretion of the FCM.

Australian Novice Contest

Object: To encourage operations of amateur radio stations in Australia, NZ and PNG, with special emphasis on contacts with novice and club stations.

Frequencies Used: All authorised novice amateur frequency allocations.

Timing and Duration: Held on a weekend in winter for a period of 24 hours.

Scoring Philosophy: Conducted in sections, eg CW, phone and receiving. Contacts with novice and club stations score higher than full call stations.

Trophies and Certificates: The "Keith Howard VK2AKX Trophy" is awarded to the novice entrant with the highest aggregate phone and CW score. Certificates will be awarded at the discretion of the FCM.

Remembrance Day Contest

This contest is held to commemorate those amateurs who died during the second world war and is designed to encourage friendly participation between all amateurs and to help improve the operating skills of all participants.

Objects. Amateurs in each VK call area will endeavour to contact other amateurs:

(a) in other VK call areas, P2 and ZL on all bands 1.8 through 30 MHz (except 10, 18 & 24 MHz)

(b) in any VK call area (including their own), P29 and ZL on authorised bands above 52 MHz

Date and Time: The weekend nearest to 15 August (VJ Day) for a continuous period of 24 hours.

Scoring Philosophy: The contest is conducted in sections, viz transmitting CW, transmitting phone, receiving, and open. It is scored on a divisional basis using a combination of three factors involvement, activity and weighting (handicap.)

In the "terms of reference" for the purpose of these rules "administration" means:

(a) Publication of the relevant rules no later than the issue of "Amateur Radio" preceeding the month in which the contest is to take place, as far as practicable.

(b) Reception of all log entries forwarded to an address determined by the FCM

(c) Checking and scoring of such number of logs as he may consider adequate, to satisfy himself that the generality of logs submitted is accurate

(d) Collating and publishing the results of WIA contests after the checking and scoring has been completed

(e) Preparation of appropriate certificates for those contestants who qualify for each such certificate

(f) Compilation of a register a contest entrants for the purpose of the contest champion trophy

(g) The FCM is required to clear all contest rule changes that are outside the attached contest guidelines with the executive prior to their publication

(h) The submission of an annual report to the council, which report shall be lodged with the Secretary of the Institute 30 days prior to the date set for the commencement of the Federal Convention in each year

(i) The FCM shall endeavour to maintain consistency in the rules from year to year

These guidelines do not mention such things as multipliers, points per contact, signal report requirements. Details are left to the discretion of the FCM, who endeavours to keep the contests popular, with rules that are broadly acceptable and are in harmony with the majority of contests worldwide.

In May AR, Ian VK5QX took me to task for allowing double points for CW contacts. My answer is that by giving extra points for CW, I try to achieve two things. Firstly to encourage more CW operation in the contest (the more the merrier), and secondly, to reward skill (anyone can use a microphone); it IS more difficult to operate CW in a contest situation.

Ian also takes me to task for increasing the maximum CW speed allowed in the novice contest from 10 WPM to 15 WPM In my opin-

ion, and I was taught CW professionally 36 years ago, sending and receiving CW at speeds up to 10WPM is very difficult. Novice stations should not be encouraged to use CW at 10 WPM, but encouraged to operate at a speed higher than they used to pass the Morse test. By doing so, they will very quickly begin to get the rhythm and feel of CW, and become proficient. The vast majority of amateurs who work CW will answer a CW call at the same speed as the calling station sends; this in itself gives encouragement to operators who normally do not use CW, or are still developing a fist.

Why reinstate RS/T reports in the RD contest? The answer is because they should never have been removed as a contest exchange requirement in the first place. It may have been trendy, in keeping with the "let's do away with logbooks", and "let's make the exams easier" changes that occurred years ago. Has the number contest entrants increased since those changes where made? No. What contest of any repute overseas does not require a signal report to be exchanged. Try and give honest signal reports in the next contest that you enter. Do not assume that is all 599 or 59. Many contest logs are marked down, and even cause disqualifications, because of the assumptions that appear in them. It may be old fashioned, but some people enter or operate in contests just to pick up the odd prefix or new country, to obtain a QSL card for some award or other ladder requirement. Why not exchange honest signal reports? The contest exchange is really an effort that you have to make, in order to participate in the contest.

Ian also sounds off about the reintroduction of the "open" section in the RD contest. I will refer you to the "Guidelines" particularly the Scoring Philosophy section.

The prevailing thoughts behind the requests for the reintroduction of the "Open" section in the RD contest was to make it more interesting, and to enable the station to maintain a higher rate of scoring throughout the contest period. What happened was that all the Open section logs received contained a good mix of phone and CW contacts. Not one was a "smart" log. In other words, all the entrants in the "Open" section had "done the right thing".

Ian's paragraph regarding the need to modify the RD scoring is correct. I do not have the answer to the problem. Eg RD formula for determination of results for each division is number of logs/number of licences (participation) X total points X weighting factor (average of last four weighting factors).

What about the number of amateurs who send in more than one log (some up to five logs), what about club stations with three or four operators? It really is a can of worms.

The portion of Ian's letter that was published in May AR caused me to go searching through the boxes of contest logs to find the full text. Perhaps a postcard would have reminded me to answer the mail. I do get a lot of mail, and I probably lose one or two in the mountain of paperwork.

By devoting so much space on the subject of the contests guidelines, and the letter from VK5QX, I now find that the contest championship results will have to wait until the August issue of "AR".

European DX-Contest

The Deutscher Amateur Radio-Club (DARC) has the honour to invite amateurs all over the world to participate in the annual European DX-Contest.

1 Contest Periods

CW: August, second weekend 12/13 August, 1989

SSB: September, second weekend 9/10 September, 1989

RTTY: November, second weekend 11/12 November, 1989

1200 UTC Saturday to 2400 UTC Sunday

2: Bands 3.5, 7, 14, 21, 28 MHz.

The minimum time of operation on a band after a band change is 15 minutes - except for working a new multiplier. According to IARU-region 1 regulations contest operation is not allowed on the following band sections :-

CW: 3550-3900; 14075-14350; 21100-21450, 28100-29700 kHz

SSB: 3650-3750; 14300-14350; 21400-21450, 28700-29700 kHz

3: Classifications

(a) Single operator - all bands

(No assistance in log-keeping and multiplier-searching allowed.)

(b) Single operator - high bands

(As above, but operation on 14-21-28 MHz only.)

(c) Multi operator - single transmitter

(Only one signal on any band at the same time is permitted.)

(d) SWL

See special regulations (Rule 12)

4 Rest Periods

Of the 36 hour contest period, only 30 hours of operation are permitted for single operator stations. The 6 hours of non-operation may be taken in one, but not more than three periods at any time during the contest. They must be clearly noted in the log.

5: Exchange

A contest QSO can only be established between a non-European and a European station (except in RTTY). Exchange the usual five or six digit RS/RST plus a progressive QSO number starting with 001. A station may only be worked once per band.

6: Multipliers

(a) The multiplier for non-European stations is determined by the number of European countries worked on each band (see WAE country list).

(b) European stations use the current DXCC-country-list. Each non-European country counts one multiplier unit per band.

Multiplier Bonus: 3.5 MHz.

The multiplier on 3.5 MHz may be multiplied by FOUR.

The multiplier on 7 MHz may be multiplied by THREE.

The multiplier on 14/21/28 MHz may be multiplied by TWO.

7: QTC-Traffic

Additional point credit can be achieved by reporting a QTC, i.e. data of a QSO between a non-European and a European station earlier in the contest, back to a European station. After working a number of European stations, these QTCs can be reported back during a QSO with another European station. A QTC can only be sent from a non European to a European station (for RTTY see Rule 13).

(a) A QTC contains the time, call sign, and QSO number of the station being reported. QTC: 1307/DA1AA/431 mean you worked DA1AA at 1307 UTC and received his serial number 431.

(b) A QSO may be reported only once and not back to the orginating station.

(c) A maximum of 10 QTCs can be sent to the same station, which can be worked several times to completed this quota. Only the orginal contact, however, has QSO point value.

(d) Keep a uniform list of QTCs sent. QTC 3/7 indicates that this is the 3rd series and that 7 QSOs are now being sent.

(e) European stations may record the QTCs received on a separate sheet with a clean indication of their sender.

(f) If more than 100 QTCs are claimed, a QTC checklist must show that the maximum quota of 10 QTCs per station is not exceeded.

8 Scoring

The final score is computer by multiplying the sum of the total number of QSOs and QTCs by the sum of multipliers from all bands (cf. Rule 6).

9 Contest Awards

Certificates will be awarded to the highest scorer of the different classifications in each country. Continental leaders will receive a plaque. Each participant with at least half the score of the continental leader will receive a certificate.

10 Disqualification

Violation of the rules of this contest, or unsportsmanship conduct, or taking credit for excessive duplicate contacts will be deemed cause for disqualification. Each duplicate QSO or excessive QTC will result in a penalty of 3 QSO/QTC points.

11 Logs

To ease checking, participants are expected to arrange their logs according to the official WAEDC log form. All band changes have to be clearly indicated. The log must be accompanied by a summary sheet and dupe check sheets for all bands with more than 200 contacts. Sample log and summary forms are available from the address below. Please send an SASE or sufficient postage (IRCs).

12 Special Regulations for SWLs

SWLs log stations working in the WAEDC. Participation is only possible in the single operator/all band class. SWL logs from members of a team in the transmitting category cannot be accepted.

The same call sign - European or non-European - may only be logged once per band. The log must contain both call signs and at least one of the control numbers. Each contest QSO logged counts 2 points, each completed QTC (max. 10 per station) 1 point. Multipliers are determined by the DXCC and WAE country lists (Rule 6).

13. Special Regulations for RTTY

In the RTTY section of the WAEDC there are no continental limitations. QTC-traffic, however, is not allowed within one's own continent. Each station may send and receive QTCs. The sum of QTCs sent and received must not ex-

ceed 10

14. Deadline for log entries

CW: September 15th, SSB: October 15th; RTTY: December 15th

15. Mailing Addresses

WAEDC-Contest Committee, PO Box 1328, D-8950 Kaufbeuren, FRG.

16. WAE-Country List

C31 CT1 CU EA EA6 EI F G-GD-GI-GJ-GM-GM Shetlandd-GU-GW-HA-HB-HB0-HV-I-IS-IT-JW Bear -JW Spitsbergen-JX-LA-LX LZ OE OH OH0-OJ0 OK ON OY OZ-PA-SM-SP-SV-SV5 Rhodes-SV9 Crete-SY Athos-T7 TA1-TF TK UA1346 UA2/UZ2F UA1 Franz-Josef-Land UB UC UN/UA1N/UZ1N-UO-UP-UQ-UR-Y2-YO-YU-ZA-ZB2-1A0-3A-4UI Geneva-4U1 Vienna-9H1.

Criteria for the Awarding of Certificates and Trophies in the WAEDC

1: Minimal Requirements for a certificate or a trophy are 100 QSOs or 10,000 points. In addition, at least one of the following conditions must be fulfilled.

2: Certificates

(a) Top score in a country

(b) In countries or districts with high participation an additional certificate will be given for each full block of ten participants.

(c) Members of the Top Ten or Top Six (multi operator) lists

(d) Continental winners.

(e) Stations with at least half the score of their continental winner.

(f) Participants with at least 100,00 points.

3: Trophies

(a) Continental winners in the single operator category are awarded a plaque.

(b) Continental winners in the multi operator category will be awarded a plaque if they have at least 100,00 points, or at least the score of the winner in the single operator category in their continent.

(c) A station may receive a plaque in the same category only once within a three year period.

(d) Special plaques will be presented to all members of the Top Ten/Six if they have been in this list for a t least five times.

(e) The WAEDC Committee reserves the right to honour outstanding achievements in the contest by additional plaques.

Remembrance Day Contest 1989 Rules

Objectives: Amateurs in each VK call area will endeavour to contact other amateurs in other VK call areas, P2 and ZL in the bans 1.8 to 30 MHz, with the exception of the WARC bands 10, 18 and 24 MHz. Also, in any VK call area, including their own, P2 and ZL on bands above 52 MHz, and as indicated in the rule 5.e.

Contest Period: Between 0800 UTC August 12th and 0759 UTC on 13 August 1989.

*All Australian amateurs stations are requested, as a mark of respect, to observe 15 minutes silence prior to the commencement of the contest. During this period, the Opening Ceremony broadcast will take place.

Rules

1 There will be two contest categories

(a) High frequency (HF) for the bands below 52MHz

(b) Very High Frequency (VHF) for the 52MHz band and above

2 In each category there will be four sections

(a) Transmitting phone

(b) Transmitting CW

(c) Transmitting OPEN

(d) Receiving

2A Modes applicable to each section are as follows.

(a) AM, FM, SSB, TV

(b) CW, RTTY

(c) AM, FM, SSB, TV, CW, RTTY

(d) Any of the above listed modes

3 Eligibility

All Australian amateurs (VK call sign), ZL and P2 stations may enter the contest, whether their stations are fixed, portable, or mobile. Members and non-members of the Wireless Institute of Australia are eligible for awards.

4 Cross Mode operation is permitted. Cross band operation is not permitted, excepting via a satellite repeater.

5 Scoring

(a) Phone contacts score ONE point

(b) CW and RTTY contacts score TWO points

(c) On all bands, a station in another call area may be contacted once on each band using each mode, i.e. you may work thesame station on each band on phone, CW, RTTY and TV

(d) On the VHF bands, the same station in ANY call area may be worked using any of the modes listed, at intervals of not less than two hours since the same band mode contact. However, the same station may be contacted repeatedly via satellite not more than once by each mode on each orbit

(e) Acceptable logs for all entries must show a minimum of at least TEN valid contacts, and in the Open section, a reasonable mixture will be required, i.e. a log with 500 phone and 10 CW contacts would be judged as a phone entry.

6 Multi-operator stations are not permitted (except as in Rule 7), although log-keepers are allowed. Only the licensed operator is allowed to make a contact under his/her own call sign.

Should two or more operators wish to operate any particular station, each will be considered as a contestant, and must submit a log under the individual call sign which applies to that operator.

7 Club Stations

Club stations may be operated by more than one operator, but only one operator may operate at any one time, i.e. no multi-transmission. All operators at a club station must sign the declaration.

8 Contest Exchanges

For a contact to be valid, a signal report and serial number must be exchanged. This will consist of a RS/RST plus a serial number. The serial number will commence with 001, and will increase by one for each contact. Should a serial number of 999 be reached, the serial number again reverts to 001.

9 Terrestrial Repeaters

Contacts via terrestrial repeaters are not permitted for scoring purposes. Contacts may be arranged through a repeater, and if successful on another frequency, will count for scoring purposes. The practice of operating on repeater frequencies in simplex mode is not permitted.

10 Portable Operation

Log scores of operators, located outside their allocated call areas, will be credited to that call area in which the portable operation took place.

11 Entries

A log of all contacts must be submitted. This should be in the format as shown in the examples, and must be on one side of the paper only.

Entries must be on a standard size sheet such as Foolscap or A4 etc. Larger computer printout sheets are acceptable. Bits of scrap paper and narrow rolls will not be accepted.

A front sheet must also be included showing the following information in this order: category (HF or VHF), section (phone, CW, open, receiving), call sign, name, address, total score, page tally.

Declaration: "I hereby certify that I have operated in accordance with the rules and spirit of the contest"

Signed. . . . . .

Dated. . . . . .

Logs are to be forwarded to the Federal Contest Manager, C F Beech VK7BC, 37 Nobelius Drive, Legana, Tasmania 7277.

Envelopes are to be endorsed REMEMBRANCE DAY CONTEST on the front. Entries must be forwarded in time to reach the Federal Contest Manager by 30 September 1989.

12 Disqualification

See the general disqualification rules as printed in the Contest Section of June 1989 "Amateur Radio".

Contestants should note also, the General Contest basic rules in the same issue of "AR". Any station observed during the contest as constantly departing from the generally accepted codes of operating ethics, may also be disqualified.

Late Entries. These will be used as check logs only.

Receiving Section

1: This section is open to all shortwave listeners in Australia, New Zealand and Papua New Guinea. No active transmitting station may enter this section.

2: Contest times and logging of stations on each band are as for transmitting.

3: Logs should be set out as per example. It is not permitted to log stations calling CQ. The details shown in the sample must be recorded.

4: Scoring will be as per rule 5 for transmitting, with other aspects of that same rule also applying.

5: Club stations may enter this section. All operators must sign the declaration.

6: Awards. Certificates will be awarded to

the highest scorer in each call area. Further certificates may be issued at the discretion of the FCM

Determination of the Winning Division

Scores of stations in VK0 are added to VK7.

Scores by VK9 stations are added to the mainland call area which is geographically nearest. Scores claimed by ZL and P2 stations are not included in the scores of any VK call area.

The formula used to determine the winning WIA division is applied on a divisional basis, using a combination of three factors, namely: involvement, activity and weighting factor

Guidelines for Certificate Issue, Remembrance Day Contest

Certificates will be issued on the following basis:-

1 Top scorer in each section (see also 4 below)

2 Top novice station in each section, but as per proviso 3 below (N/K calls compete on an equal basis when operating in HF (novice) band segments, therefore, there is no justification for separate certificates for each different type of call sign.)

3 Where an entry other than the top scorer is concerned (as per 2 above), a certificate will only be issued to a station, if that station's score is equal to, or greater than, the average score in the applicable section for that state/division.

4 Where only one entry exists in any section, a certificate will only be issued when the score for that category/section of the contest.

5 On VHF, the top scorer in each section will be awarded a certificate. There is no justification for separate awards for holders of Full, Z or K calls, as each competes on an equal basis on VHF.

6 The above rules apply with the understanding, as an already determined policy, that the Federal Contest Manager has the power of discretion in such matters, and may either award additional certificates where he considers it warranted, or not issue a certificate, if he considers one unwarranted

Example Front Sheet - Remembrance Day Contest 1989

Category: HF Section: (a) Transmitting phone
Call Sign: VK8ZZZ Name: Tom Brown
Address: 807 Iceberg Road, Darwin, 8100
Total Score: 2536 points

14 Sheets		2536 points
	Page 1	46 points
	2	38 "
	-	- -
	-	- -
	-	- -
	14	21 points
Total 14 Pages		2536 points

Declaration: I hereby certify that I have operated in accordance with the rules and spirit of the contest.
Signed: T. Brown Dated 3.9 1989

Example Transmitting Log - Remembrance Day Contest 1989

Call Sign: VK8ZZZ Category: HF
Section: Transmitting Open

Date/Time (UTC)	Band (MHz)	Mode	Call Sign	Number Sent	Number Received	Points
12.8.89						
0901	14	SSB	VK6NE	57001	58001	1
0902	14	"	VK4TI	59002	58001	1
0904	14	"	VK7BJ	59003	59003	1
0906	7	CW	VK0AA	569004	479002	2
0909	7	SSB	VK7BC	55005	58001	1
-	-	-	-	-	-	-

Page 1 of 13 Page Total: 62.

Example Receiving Log - Remembrance Day Contest 1989

Date/time (UTC)	Band (MHz)	Mode	Stn. calling	Stn called	No. Sent	No. Received	Points
12.8.89							
0800	21	SSB	VK1XXX	VK6LLL	001	002	1
0815	7	SSB	VK7YY	VK8QW	014	009	1
-		-	-		-	-	-

Page 1 of 8 42 Points

Remembrance Day Contest 1989 - Commemoration

As in previous years, I will list the names of those amateurs who lost their lives whilst on active service during the second world war, and who are commemorated with their names being engraved on our Remembrance Day Contest trophy. It is these names that you will hear read out as part of the opening ceremony prior to the commencement of the contest.

VK2BQ	F W S Easton	RAAF
VK2JV	C D Roberts	AMF
VK2VJ	V J E Jarvis	RAAF
VK2YK	W Abbott	RAAF
VK2AJB	C G Curle	RAAF
VK3DQ	J D Morris	AMF
VK3GO	T Stephens	RAAF
VK3HN	J McCandish	AMF
VK3IE	J E Mann	RAN
VK3NG	N E Gunter	MN
VK3OR	M D Orr	RAAF
VK3PL	J F Colthorp	RAAF
VK3PV	R P Veall	AMF
VK3SF	S W Jones	AMF
VK3UW	J A Burrage	RAAF
VK3VE	J E Snadden	RAAF
VK4DR	D A Laws	AMF
VK4FS	F J Starr	RAAF
VK4PR	R Allen	RAAF
VK5AF	C A Ives	RAAF
VK5BL	B James	RAAF
VK5BW	G J Phillips	AMF
VK6GR	A H G Rippin	RAN
VK6JG	J E Goddard	RAAF
VK6KS	K S Anderson	AMF
VK6PP	P P Paterson	RAAF

The 13th West Australian Annual 3.5MHz CW & SSB Contests

C Waterman VK6NK
42 Kennedy Street
Melville 6156

Transmitting and Receiving

1 Duration. CW Sunday 30 July SSB Sunday 17th September
Between the hours of 1030z and 1330z time, i.e. three operating hours for each contest.

2 Frequencies. All contacts to be made in the 3.5/3.7 MHz band using frequency allocation applicable to your licence conditions.

3 Calling. Stations will call CQ WAA using the three times three technique. Infringement of this rule by the use of long CQ calls may entail disqualification, as will prearranging of a QSO.

4 Scoring: Points for contacts are as follows:-

Within Western Australia	5 points per contact
WA to all Mainland Eastern States	2 points per contact
WA to VK7	4 points per contact
WA to VK0 and overseas	8 points per contact
With WA stations only	3 points per contact

5 Multipliers: A multiplier of 2 per WA Shire worked will apply to the final score. WA Stations north of the 26th Parallel only an additional multiplier of 1.3 will apply per contact confirmed with stations south of the 26th Parallel.

6 Contacts. Stations may be worked twice on each night, i.e. once between 1030z to 1300z, these contacts will count for points. Each time, the contact for WA stations will take the form of an exchange of five characters, comprising RST/RS and Shire Letters. eg. A station in Northam sends 579NM, or if in Harvey, 579HY. This helps towards the worked all shires award. Eastern states and overseas stations will send RST/RS plus a running number starting at 001.

7 Logs. Contest Logs to be set out on one side of a Quarto or Foolscap sheet, with columns headed as follows:

DATE: CALL: OPERATOR.

TIME Z	CALL WKD	RST OUT	RST IN	SHIRE LETTERS	SHIRE MULTIPLIER	POINTS CLAIMED

Column 7 to be totalled at the foot of each page and the running totals brought forward. The last page to contain the following summary: total number points scored, input power, equipment and antennas used, along with comments on the contest in general.

All logs to be addressed to the WAA Contest Committee, 42 Kennedy Street, Melville, WA 6156, and posted so as to reach us not later than 6 October, for both contests. The results will be published in the December issue of AR.

Shire Identification Letters

1	-	Albany Town	AT
2	-	Albany	AL
3	-	Armadale	AK
4	-	Augusta/Margaret River	AM
5	-	Bassendean	BA
6	-	Bayswater	BW
7	-	Beverley	BV
8	-	Boddington	BO
9	-	Boulder	BD
10	-	Boyup Brook	BB
11	-	Bridgetown/Greenbushes	BG
12	-	Brookton	BK
13	-	Broome	BE
14	-	Broomehill	BH
15	-	Belmont	BL
16	-	Bruce Rock	BR
17	-	Bunbury	BY
18	-	Busselton	BN
19	-	Canning	CA
20	-	Capel	CL
21	-	Camamah	CH
22	-	Carnarvon	CN
23	-	Chapman Valley	CV
24	-	Chittering	CI
25	-	Claremont	CT
26		Cockburn	CR
27	-	Collie	CE
28		Coolgardie	CG
29	-	Coorow	CW
30		Corrigin	CS
31	-	Cottesloe	CO
32	-	Cranbrook	CK
33	-	Cuballing	CB
34	-	Cue	CU
35	-	Cunderdin	CD
36	-	Dalwallinu	DU
37	-	Dandaragan	DN
38	-	Dardanup	DP
39	-	Denmark	DK
40		Donnybrook/Balingup	DB
41	-	Dowerin	DR
42	-	Dumbleyung	DG
43	-	Dundas	DS
44	-	East Fremantle	EF
45	-	East Pilbara	EP
46	-	Esperance	ES
47	-	Exmouth	EH
48	-	Fremantle	FM
49	-	Gingin	GG
50	-	Gnowangerup	GP
51	-	Geraldton	GN
52		Goomalling	GM
53	-	Gosnells	GS
54	-	Greenough	GR
55	-	Halls Creek	HC
56	-	Harvey	HY
57	-	Irwin	IN
58	-	Kalamunda	KA
59	-	Kalgoorlie	KL
60	-	Katanning	KG
61	-	Kellerberrin	BN
62	-	Kent	KT
63	-	Kojonup	KP
64	-	Kondinin	KD
65	-	Koorda	KO
66	-	Kulin	KU
67	-	Kwinana	KW
68	-	Lake Grace	LG
69	-	Laverton	LV
70	-	Leonora	LA
71	-	Mandurah	MB
72	-	Manjimup	MP
73	-	Meekatharra	MK
74	-	Melville	MV
75	-	Menzies	MZ
76	-	Merredin	MD
77	-	Mingenew	MW
78	-	Moora	MA
79	-	Morowa	MR
80	-	Mosman	MS
81	-	Mukinbudin	MU
82	-	Mullewa	ME
83	-	Mundaring	MG
84	-	Murchison	MH
85	-	Murray	MY
86	-	Mt Magnet	MM
87	-	Mt Marshall	ML
88	-	Nannup	NP
89	-	Narembeen	NN
90	-	Narrogin	NG
91	-	Narrogin Town	NT
92	-	Nedlands	NL
93	-	Northam	NM
94	-	Northam Town	NO
95		Northampton	NH

96	-	Nungadin	NG
97	-	Pepperming Grove	PG
98	-	Perenjori	PJ
99	-	Perth	PH
100	-	Pingelly	PY
101	-	Plantagenet	PT
102	-	Port Hedland	PD
103	-	Quairading	QG
104	-	Ravensthorpe	RT
105	-	Rockingham	RM
106	-	Roebourne	RB
107	-	Sandstone	SS
108	-	Serpentine/Jarrahdale	SJ
109	-	Shark Bay	SB
110	-	South Perth	SP
111	-	Stirling	ST
112	-	Subiaco	SU
113	-	Swan	SW
114	-	Tambellup	TP
115	-	Tammin	TM
116	-	Three Springs	TS
117	-	Toodyay	TY
118	-	Trayning	TG
119	-	Upper Gascoyne	UG
120	-	Victoria Plains	VP
121	-	Wagin	WN
122	-	Wandering	WD
123	-	Wanneroo	WO
124	-	Waroona	WR
125	-	West Arthur	WA
126	-	Westonia	WS
127	-	West Pilbara	WP
128	-	Wickepin	WI
129	-	Wiluna	WU
130	-	Williams	WL
131	-	Wongan/Ballidu	WB
132	-	Woodanilling	WG
133	-	Wyalkatchem	WY
134	-	Wyndham East Kimberley	WE
135	-	West Kimberley	WE
136	-	Yalgoo	YO
137	-	Yilgarn	YN
138	-	York	YK

ar

Have You Renewed your Licence?

The Department of Transport and Communications has introduced a new system of payment for radiocommunications licence fees.

Under the system licensees should receive an annual first and final notice for renewal within four to six weeks prior to the expiry date.

DOTC will no longer issue reminder notices. Instead licensees who don't pay their fees by the due date will be notified that their licences are no longer valid.

The onus still remains with the licensee to pay the fee by the appropriate date, even if they claim no first and final notice was received in the post.

Under the current computer system used by DOTC there is a possibility that an expired amateur callsign could be immediately re-issued.

Editorial Apologies - June Issue

Measurement of Distortion.

This article was printed without any acknowledgment of the author! Regular readers would have recognized the clear and unambiguous style, together with the thorough and comprehensive technical treatment, as being the work of none other than Lloyd Butler VK5BR.

As Lloyd himself rightly states, omission of the by-line is the "ultimate publishing sin". Injury was added to insult, by corruption of his mathematics :-

Page 13, under Phase Distortion Δf should have been equal to frequency CHANGE in Hertz.

Page 16, figure 22 should have read :-

Θ = Phase Shift Between A and B

$X = \overline{A.B}$ $Y = \overline{A.B}$

$Z = X.Y$

On page 26, Harry Atkinson VK6WZ was awarded what we trust will be the last honorary doctorate issued by this magazine! Apologies to Harry for any leg-pulling he has had to suffer.

On page 3 the VK4 Treasurer is Eric Fittock. We seem to have insisted that he be called Neil, despite the wishes of his Mum and Dad!

On Page 57 the Awards column was of course written by our Federal Awards Manager, Ken Gott VK3AJU. Ken has expressed the philosophical view that any of his mistakes will be recognised nevertheless. Thanks Ken.

Murphy can take some of the blame for these publishing sins; the balance is due to the change in editorial arrangements.

ar

Imported Power Cords Hazard

Some imported power leads designed for personal and business computers have not been approved by electric supply authorities and at least two were found to be very dangerous.

Victoria's Chief Electrical Inspector Ian Coleman warned that use of unapproved power leads could create a very dangerous situation when computers were switched on.

Two types had been found to have the earth conductor connected to the active pin of the three-pin plug.

Anyone who has either of the two types of leads should stop using it immediately and return it to the store from which it was purchased.

The State Electricity Commission of Victoria in a statement said one of imported products had the plug marked "Stabile" SP-2 and its cord had the identification "Ta Hsing" 3344002

The other had an unmarked black three pin plug with the cord marked "Yeh Yang" 0444016.

Anyone in doubt about the safety of their power leads should contact their electric supply authority.

ar

Morseword No 28

SOLUTION PAGE 52

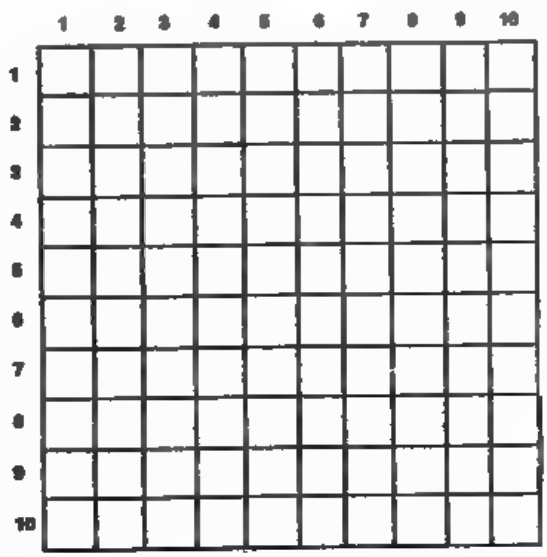
Clues

Across

1 Felines
2 Genuine
3 Went
4 Cry
5 Dispossess
6 Catch
7 Post
8 Wat cut
9 Grabs
10 Type of cheese

Down

1 Ship
2 Deeds
3 He gives a time to
4 Strict
5 Modified iron
6 Arthritic disease
7 Take
8 Leafe of a book
9 Certain
10 Icecreams



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DIVISIONAL NOTES

VK2 Notes

Tim Mills
VK2ZTM

New Council

About 65 Members were in attendance for the deferred AGM held 27 May last. For the first time since 1985, an election was required. A little over 300 ballots were returned. Some of the returned envelopes still had this year's membership card in them. Based on the number of cards returned, perhaps some 60 to 70 VK2 Members have their 1989/90 cards still in their annual report. If you have since discarded your annual report, and forgotten to collect the card, you may apply at the office for a replacement in person, or send in a stamped self-addressed envelope.

The ballot resulted in the following being elected :-

Peter Balnaves VK2CZX	Secretary
Reg Brook VK2AI	Affiliated Clubs
Roger Henley VK2ZIG/NWH	President
Dave Horsfall VK2KFU	Treasurer
John Martin VK2EJM	Membership
Tim Mills VK2ZTM	Vice President
Terry Ryeland VK2UX	Vice President

A full listing of the various office-bearers and portfolios will be included in future notes.

Bookshop

The Divisional bookshop has some stock of ARRL and RSGB publications at the moment. Most back orders should now be filled.

Survey

There was a good early response to the VK2 survey which was an insert to June Amateur Radio. A lot of information was obtained for the benefit of Council. By now the broadcast will have reported on the major points. Thanks also to the many Members who wrote, often with detailed comments, on the proposed fees increase. There have been several reports on the Sunday broadcast, including some of the comments received.

Historic QSL Cards

The Divisional Historian, Jo VK2KAA advises that Val Bourke, XYL of Stan VK2EL, has taken over the section maintaining the historic QSL card collection. Some members appear to be unaware that the Division has been maintaining this side of the old records, and have been sending historic material interstate. If you have any items which may be of an historical benefit to the Division, please contact either the Divisional Office or Jo, VK2KAA direct.

Events

June 3rd was a little wet for the Dural fireworks, and another attempt was made on the 17th. The "Trash and Treasure" at Dural on 28 May was very successful, with a good attendance and a day without water. Hopefully, the first of regular T&T's at Dural. The next T&T is July 30 at Parramatta.

The Satellite Seminar during May, when Graham VK5AGR provided over 7½ hours of information in three sessions, was well attended. A set of video tapes will soon be available for loan from the office, as well as a new printing of the notes. The broadcast will advise.

WICEN

For many years, WICEN has been a member squad of the VRA, which is in turn supported by the State Government through the Police Department. In order to take better advantage of this association, and the guidelines laid down, WICEN has become incorporated. Incorporation was granted to WICEN (NSW) Inc on the 24 May 1989. A separate report is being prepared to inform VK2 Amateurs of the changes.

Donations

During the Annual General Meeting, there was the opening of VK2AWI, the station established in the library at Amateur Radio House. A generous donation by Kenwood Electronics Australia Pty Ltd provided equipment for all Amateur Bands, from 160 metres to 70cm. A permanent antenna installation is now being completed.

Dick Smith Electronics have donated Yaesu equipment, to establish a 23cm FM repeater to be installed at VK2WI. Work is proceeding, and it is likely that simplex transmissions of the broadcast will be made while the remaining repeater system is constructed.

Divisional Council would like to thank these organisations for their support of the Division and Amateur Radio with their equipment.

New Members

A warm welcome is extended to the following people, who were in the June intake :-

E F Byrne	Assoc	Goulburn
H L Charlton	VK2PHC	Wilberforce
M M Erskine	Assoc	Nowra
M P Galvin	VK2XOC	Round Corner
R Katsch	VK2EIK	Epping
G F Macrae	Assoc	Uralla
N McGilvray	Assoc	Auburn
S Peck	VK2FTV	Lane Cove
G J Rees	VK2PYU	Kempsey
L J Roach	VK2PBM	Muswellbrook
M Sinclair	VK2BMS	East Willoughby
D Stock	Assoc	Lae PNG
G Stockton	Assoc	Ryde

VK3 Notes

The WIA QSL Bureau

The Inwards QSL Bureau has been closed since May 2 and is being reorganised. Due to the lack of adequate voluntary labour, the WIA Victorian Division has reached an arrangement with a major radio club to sort and despatch the cards. The Bureau will remain a WIA service, provided free to WIA members.

People who are not members of the WIA will have to pay an annual fee if they wish to use the Bureau. Only those registered with the Bureau can use this facility. The Moorabbin and District Radio club is willing to assist the WIA by taking on the basic tasks of sorting and despatching cards and maintaining Bureau records. The Club will provide the labour and storage needed for the Bureau, and will receive from the WIA an annual payment into its Club funds.

Under new procedures, the Bureau will send cards at regular 90 day periods to distribution points throughout the state. These distribution points, estimated to be 15, will then make cards available at meetings or by other mutually agreed methods. The distribution point method is not new and has operated successfully in two country regions for a number of years. All Bureau users will be invited to register with the Bureau and nominate from a list the distribution point they want to use to obtain their cards. An individual letter will go to some 900 people who had been registered with the old Bureau.

Those who had lodged deposits with the old Bureau in excess of $1 00 will receive a refund. Full details of the new procedures and the distribution points will be issued on the weekly VK3BWI broadcast, through the VK3 Notes column, and via clubs and zones.

WIA 80 Logo

The WIA will soon begin celebrating its 80th anniversary. There are a number of activities planned and it's hoped Victorian Division members will give them their support.

The first activity is to create a unique WIA 80 Logo. Details will be publicised in AR magazine.

Have a think about it, make a sketch and submit an entry to the WIA 80 Logo competition. You may have someone in your family, or a friend or work colleague who is artistic; they are also eligible to enter.

Membership Fees

In this column last month, the WIA Victorian Division gave an explanation about the, then, proposed new structure, planned to start from July 1, 1989.

After that material went to print, the Division became aware that the proposed new fee of $70 00, although passed by a majority vote at the WIA Federal Convention,had been rejected by at least two other Divisions. As soon as this information was available, it was put on the WIA Sunday broadcast through VK3BWI.

The situation is that there will be no fee rise in Victoria this year. The 1990 membership fees are yet to be determined.

Jim Linton VK3PC

VK4 Notes

New Awards Manager

We thank our past manager John VK4YX who over the years has worked hard, and now takes a well earned rest. A big welcome to Val VK4VR, who has undertaken to keep this important portfolio going. Each week, the Queensland Net is on 3.605 MHz ± at 10 00 utc on Thursdays. We would like to hear your station call in, and work towards the various awards.

Bill Horner VK4MWZ
26 Iron Street
Gympie 4570

DIVISIONAL NOTES

"5/8 Wave"

Jennifer Warrington VK5ANW
59 Albert Street
Clarence Gardens 5039

New Council Members for 1989

President	Don McDonald VK5ADD
Secretary	Hans Van Der Zalm VK5KHZ
Treasurer	Bill Wardrop VK5AWM
Federal Councillor }	
Vice President }	Rowland Bruce VK5OU
QSL Buro Manager }	
Vice President }	
Alternate Fed C }	
DOTC Liaison }	Bob Allan VK5BJA
SATAC Co-Ord. }	
Assist. Treasurer }	
Past President }	Jenny Warrington VK5ANW
Convention Co-Ord }	
Minute Secretary }	Ben Broadbent VK5ABE
SATAC Assistant }	
Membership Secretary }	Alan Mallabone VK5NNM
Public Relat. Officer }	
Clubs' & Country	
Members Rep.	Ken Westerman VK5AGW
Program Organiser	Peter Maddern VK5PRM
Education Officer	John McKellar VK5BJM
WICEN Director	Ian Watson VK5KIA

We welcome Ben and John on to the Council and hope that they will enjoy their time with us. Unfortunately, we shall be losing Ken from Council later in the year, when our loss will be VK2's gain. We shall miss you and Jann, Ken; you have been part of the Divisional Council for so long now that it will seem strange not having you around.

Deceased Estates Committee

We are still looking for people to help with the disposal of Deceased Estates. So far, Steve VK5AIM has volunteered to do the areas North of Grand Junction Road. (He didn't say whether that takes in Darwin and Alice Springs, or not!) Ron VK5ACC has also offered to help Steve. Don Naime VK5XX has also volunteered his services. As Don lives at Millswood, he could do some sort of Central Area, so it looks as though we are looking for someone Central to help Don, and perhaps a couple of people in the Southern suburbs. Bona-fide members will be given a letter of introduction to take with them.

Do you FAX?

Steve Robertson VK5BSR would like to hear from anyone who can transmit FAX and Slow Scan TV. Steve has been transmitting from time to time, but so far has been unable to contact anyone else. If you, like Steve, are looking for contacts on either of these modes, please contact Steve (who is QTHR in the call book).

Diary Dates

Tuesday 25 July, 7:45 p.m. (Speaker unknown at time of going to press.)

Flight Phones Agreement

Airline passengers will be able to make telephone calls, and send and receive fax's under an agreement signed by telecommunications authorities.

In-flight calls will be available from 330 airlines including Qantas late next year using the latest in satellite communications technology.

An agreement involving telecommunications authorities including Australia's OTC involves the construction of a global network of six ground stations.

Using 18 metre dish antennas the stations will be in Western Australia, Canada and France.

HMCS Protector Award: Net Details

Ken Gott VK3AJU
Federal Awards Manager
38A Lansdown Road
St Kilda 3183

I wonder how many readers know that HMCS stands for "Her Majesty's Colonial Ship" It had me stumped until I read the details of this new award offered by the VK5 group of the Royal Naval Amateur Radio Society

Before Australia federated in 1901, each state had its own armed forces and their naval vessels were designated as HMCS

HMCS Protector, launched in 1963 at a cost of £65,600, was the only ship in the VK5 Colonial Navy For her time, she was a beauty, with, with an 8" gun, five 6" guns and five ten barrel Gattling guns. She was no stay-at-home either. She sailed to China as part of the multinational force sent to intervene in the Boxer uprising in 1900

HMCS is commemorated on the new RNARS award certificate (see illustration) The artwork was designed by Bill VK5RA, enhanced by George VK5CGB, and prepared for printing by Derek VK5ADH The Army gave a helping hand with the actual printing, making the job a real combined operation

The HMCS Protector Award is operative from July 1, 1989, and to win it, VK's and ZL's must QSO VK5RAN and two other VK5 members of the RNARs, plus one other RNARS member in three different states (total of six contacts). Log extracts must contain the RNARS membership numbers of the operators contacted. The log extract must be signed by two other amateurs.

DX applicants need only contact VK5RAN, one other VK5 RNARS member, and one other from another state. Membership numbers are again required.

All bands and modes are acceptable, with appropriate endorsements available. Cost is A$5 or five IRC's

RNARS members commonly use these frequencies -

On Mondays.3 615, 1000-1130Z, and 3.620 MHz, 1100-1200z

On Tuesdays.3 521 MHz, 0930-1030z and 3.527 MHz 1030-1130z

On Wednesdays 21 33 MHz 0930-1030z, and daily on 14 0+52 MHz, 0500-0900z

Other frequencies used by members are:-

7090 mHz, 144.335, 21 360 and 28 410 (SSB) and 3.520, 3 527, 7020, 14.052 and 28052 (CW).

South Australian group members active include VK5's AF, HH, RM, VG, WE, YT, AFB, AFN, AFP and NDX

Award applications should go to Jack Peatfield VK5AF, 1 Filmer Avenue, Glengowrie, SA 5044

The group always welcomes new members and any VK5 with a naval or maritime past (or present) is welcome to join by contacting VK5CGB QTHR

(In 1949 I worked my passage to the UK as a supernumerary at a shilling a month on the SS Lochybank. I wonder if I qualify?)

Artwork for HMCS Protector Award

	1	2	3	4	5	6	7	8	9	10
1	—	·	—	·	·	—	—	·	·	·
2	·	—	·	·	·	—	·	—	·	·
3	·	—	·	·	·	·	·	—	·	—
4	·	·	·	—	—	—	—	·	·	·
5	—	—	—	·	·	—	·	·	·	—
6	—	·	—	·	·	—	·	—	—	·
7	—	—	·	—	·	·	·	—	·	·
8	·	·	·	·	—	·	—	—	—	·
9	—	·	—	—	·	—	·	·	·	·
10	—	·	·	·	·	—	·	·	·	·

Solution to Morseword No 28

Across: 1 cats 2 real 3 left 4 sob 5 oust 6 trap 7 mail 8 sawn 9 takes 10 bne

Down: 1 boat 2 acts 3 dater 4 stern 5 steel 6 gout 7 nail 8 page 9 sure 10 ices

Bargain IRC's :For WIA Members Only

I find myself with a growing pile of IRC's, which thickened considerably last month when I received 29 applications from the USSR for the WAVKCA and HAVKCA awards, each accompanied by five IRC's

These coupons cost $1 35 each at the post office, but if you redeem one you will only get stamps to the value of 65 cents

That's why so many IRC's are never redeemed. They pass from amateur to amateur as a form of currency to pay for award certificates, to cover postage for DX cards, and for other purposes.

IRC's have no expiry dates, so countless numbers of them seem doomed to wander the earth forever, like Wagner's Flying Dutchman

After that whimsy, I have an offer to WIA members IRC's at 80 cents each, plus a SASE Please quote your WIA membership number, or the code number from your copy of AR

Remittances as you please. If you are a WIA member, your cheque is as good as gold

China Back on Air

As a result of the much publicised political and military activity in China, the operation of amateur radio stations was suspended for a month.

Many who regularly chat with friends in China on the amateur bands were concerned when regular skeds were not met

However, on Sunday, June 18, up popped BY4AA, operator Zhou, at the Shanghai Amateur Radio Sports Association

He confirmed in a contact with VK2BVS Sam Voron, that the station and all others in China had been off air for a month due to "trouble" but did not wish to elaborate

There was also some good news from China, with examination sessions being held for individuals who wish to have their own amateur station

Since the return of amateur radio to China several years ago only club stations have been permitted, mainly at universities and technical colleges

However, from August 6, 1989, individual stations using the prefix BZ are expected to be heard on air

At exams in Beijing about three months ago it was reported that 40 individuals had qualified, and a further 20 candidates were due soon to be examined in Shanghai. ar

AWARDS

New Check Point to CQ Magazine Awards

Bill Vogel VK5NVW has been appointed a CQ magazine "check point" This means that Bill is authorised to check QSL cards needed to qualify for the many attractive and challenging awards offered by CQ, thus obviating the need to send your cards to the USA.

Bill says he will be very happy to answer queries and supply rules and application forms for the various CQ magazine awards - provided that the request includes a self-addressed, stamped envelope. The envelope should preferable be business size.

Bill's address is 16 Wandilla St. Largs Bay North, SA 5016.

First DX to Win WAVKCA on VHF

Congratulations to Yoshiteru Mori JA2BZY for being the first amateur outside Australia to be awarded the WAVKCA certificate on VHF. Several other J amateurs also qualified for this award on 6m. The break came in the form of VK9YQS VKØ on Macquarie Island. No doubt AR's VHF/UHF will have more to say about recent happenings on 6m. JA2BZY's award numbered 32, not 31, as reported in June AR (Gremlins again) The numbers below are the correct ones.

1661	Vlad Gorbachov	UA1ADY
1662	Oleg V Yashkin	UA9CB
1663	Rostov ARC	UZ6LWT
1664	Anatoi Shmoylov	UA0KCJ
1665	A P Indrajaya	YC2OK
1666	Minoru Akahori	JI2EMF

HAVKCA

142	Vlad Sotnicov	UL7 023 195
143	Rimantas Talacka	UP2 038 915
144	Sergey V Kolesnichenko	UB5 077 1244
145	E A Kasatkin	UA3 121 2601
146	Mikle Zhdkov	UA3 121 555
147	Reef F Makaev	UA9 161 193
148	N Tagie	UA9 154 1289
149	Radko Club "Sweep"	UK5 073 31
150	Larry G Shagarov	UB5 073 2845
151	Alexander Zhigachov	UA6 101 62
152	Tihoo Titooh Gennady Titooh	UB5 073 307
153	Michael Demidov	UA3 142 112
154	Yuri A Lobatshev	UA0 139 76

WAVKCA (VHF)

32	Yoshiteru Mori	JA2BZY (6m)
33	Matsuo Chimuma	JA1UIU (6m)
34	Hideo Kiril	JA2DDN (6m)
35	Kenzo Nose	JA3EGE (6m)
36	Gil Sones	VK3AUI (6m)
37	Takashi Araki	JH1ECU (6m)

Help Call Goes Far

An amateur radio enthusiast in Tasmania phoned Clermont (near Rockhampton Qld) police on May 17, after picking up a call for help from a couple caught in a flooded gully near the town.

The couple, Horst and Patricia Muller, of Peak Vale Station made the radio call for help at 10.30 am after their utility slid into the gully, stalled and started to float in more than 1 meter of water, about 40km southwest of Clermont

Police and State Emergency Service members were quickly on the scene, but Mr Muller was able to move his utility by using the starter motor

Clermont policeman, Sergeant 2/c Peter Kickbusch said the signal was also picked up in Gatton, Maryborough and Springsure

The Morning Bulletin, Rockhampton

Contributed by Charles Thorpe L40018 (VK4) ar

Awards Issued Recently

WAVKCA

1643	Steven Cima	VK3CIM
1644	J E Annakin	G4KDV
1645	Idris Abdul Rahim	V85IR
1646	Jonathan Darrin Wright	G0ANH
1647	Radioklub Lok	SP3KEY
1648	Shinobu Kataoka	JH8BOE
1649	Lev Kryshin	UA0QO
1650	Vitaly	RB5NT
1651	S Sobolev	UA0SR
1652	Leonid Uvarov	UA3DRB
1653	Imant Baumanis	UQ2AP
1654	Troitsk Club	UZ9AXB
1655	Arthur Woitekunas	
1656	MRII (Minsk ARC)	UC1AWC
1657	V V Shishko	UD6DKW
1658	A V Rekunov	UL7BY
1659	Al Zharikov	UA6AIR
1660	Gera Chukhlebov	UA6ADC

CLUB CORNER

Air Forces Amateur Radio Net (AFARN)

Geoff Neville VK3GN
President

This net was launched in 1982, to foster a bond between those with the common interests of amateur radio and air force personnel, either serving, or having previously served in any recognised national air force.

Members must be in VK, P29 or ZL areas.

Our magazine, AFARNews is edited and distributed four times each year, by our Secretary and Editor, Bruce VK3VKT

On air nets are conducted :-

3.610± at 2030 hours each Tuesday evening, mainly VKs7, 5,3,2,1.

3.565± at 2030 hours each Tuesday evening, mainly for VK4s, and VK2s.

3.605 at 1600 hours each Friday afternoon.

All times are local Vic/NSW, regardless of daylight saving. Any stations interested are cordially invited to join the nets

The ADASTRAL Award is available in Green for 'phone contacts, and Gold for CW only contacts. Ten contacts are needed for each award. For members of AFARN, 20 points are needed. Cost is the same for all - namely, $3 00 (three dollars). The Awards Manager is Bob VK4NFE

The Kittyhawk Award is awarded for only one contact, and is free of charge, except that a standard sized envelope, stamped and self addressed, should be sent to contact station

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Publication _____ Issue

Queensland Amateur Radio Data and Teletype Association

The Weekly International RTTY News Bulletin

The VK4TTY news network transmits at 50 BAUD and 170Hz shift via the group's repeater VK4RBT-1, 147 050/147 6500MHz with relays on 3 630, 7045 and 14 090 MHz each Monday evening at 8.00pm Eastern Standard Time, 1000 hours UTC An amateur television relay can also be seen through the SEQATVG vision repeater VK4RTV, 579.25 MHz, (Brisbane City) Channel 34 UHT TV

The Association can be contacted by writing to.

The Secretary OARDATA, PO Box 184 Fortitude Valley, Brisbane Queensland , Australia 4006 Within the range of the repeater, members may be contacted on the association's RTTY/phone repeater VK4RBT-1 or preferably on VK4RBT-2, 147 675 MHz.

Meetings of the Association are conducted on the first Friday of each month commencing at 7.30pm at St Brendan's School Library Hall, Hawtree Street, Moorooka, Brisbane (excluding public holidays) All members and visitors are extremely welcome. Details of the Association's RTTY printed circuit project boards will be printed periodically in the bulletin, or may be obtained by writing to the Association's secretary.

Queensland Digital Group Inc

PO Box 2224
Chermside Centre
Brisbane 4032

The group has been established to further the interest in Packet Radio and other forms of digital communication in Queensland. In part, the groups objectives are -

- to formalise and guide the growth of the Packet Radio Network in Queensland
- to encourage persons to pursue activities using data communications
- to educate, and if necessary, assist in good operating practices
- to install and maintain Packet Radio Repeaters (Digipeaters)

The group was formed independently and is affiliated with the Wireless Institute of Australia. There is a current membership of about 35 and it is actively involved in installing digipeaters in the greater Brisbane area It has also helped various other clubs in getting their own digipeaters up and running

There is a lot of research and development underway for various modem circuits that can be used for packet There are circuit boards and kits available for those who have a Commodore 64 or VIC 20 to get up and running on packet in only a couple of hours. There are other circuits also being designed for other computers. The group is at present engaged in the construction of a digipeater on the Springbrook mountain site, to allow easy access to the VHF packet network, by operators on the southern side of Brisbane. We are also working on the design of radios and modems for high speed linking that will used in the future

We have already installed or assisted other groups in Queensland to install the following digipeaters :-

Maleny	VK4RZC	144.900/147.600 (Separate Systems)	(QDG)
Mt. Cootha	VK4RZB	144.850	QDG
Mt Perserverence	VK4RZD	147.600	(Toowoomba Club)
Mt Goonanamon	VK4RBU	144.900	(Bundaberg Club)
Mt Archer	VK4RAR	144.900	(WIACQ Branch)

The group meets at 7:30pm on the last Friday of the month at the Hooper Centre, Kuran Street, Wavell Heights,

The WH Hooper Centre is part of the Pre-School Centre in the grounds of the Wavell Heights State School.

There is always some sort of lecture after our (generally short) business part of the meeting.

Visitors are always most welcome

One of our biggest problems at the moment is the lack of money and manpower All the construction up to this time has come from mainly donated equipment We need MORE MEMBERS and clubs to join us, to help us complete our plans.

Membership fees are as follows :-

Joining fee $5.00

Full membership (Licensed Amateur) $10.00 per year

Associate membership (Unlicensed Amateur) $10 00 per year

For more information about the group, please write to us at the above address or you may contact the following people

President:John Bews VK4KJB Work Phone. 837 4419

Secretary:John Morgan VK4XC Phone. 269 5491

Brisbane North Radio Club

Following the AGM of the above club earlier this month, there were a few changes in office bearers.

The Club Office bearers are as follows:

President:	Ed Fisher VK4ABX	Ph: 357 6696
Vice President:	Paul Keating VK4BGT	Ph: 266 7936
Secretary:	Bill Rahmann VK4BIL	Ph. 263 2630
Treasurer:	Cress Clarke VK4CCA	Ph: 261 3363
Station Manager VK4WIN:	John Rahmann VK4APZ	Ph: 266 9874
Asst Station Manager:	Col Hinxman VK4ACH	Ph: 356 9816
Library & Property Officer:	Don Wilschefski VK4FBA	Ph: 350 2691
QSL Officer	Seb Calabro VK4FAX	Ph: 359 3539
Intruder Watch (IARUMS):	David Brownsey	Ph: 835 8322 (Work)
WICEN Rep:	Brian Mennis VK4XS	Ph: 263 6327
Education Officer:	Trevor Sherrard	Ph. 265 4974
Awards Manager:	Secretary carries out this task	
Publicity Officer:	Vacant at present.	

Club Net:

Monday evenings 7.30 pm local time on 28 42 MHz +/-. Also Saturday Evenings, same time on 3.62 +/- (calling freq., no net).

Club Meetings:

Second Friday of the month at 7 30 pm in Preschool Room at the Hooper Education Centre, Kuran Street, Chermside

Fourth Friday extra workshop night, about every three months, ONLY when there are five Fridays in the month. Same time and frequency

QSLs

The QSL Bureau is available only to WIA members, however, all club members can use the club PO Box as a QSL address The Secretary will clear the box before meetings and bring along the cards, and give them to the QSL manager, or the member if he is there. QSL cards bearing the club emblem may be purchased from the club, from time to time, at $6 00 per 100. Also the club keeps a stock of WIA QSL Bureau stickers. These are supplied at a slight premium, which goes to club funds

The Club Award

Any amateur or SWL may obtain this by contacting (or logging if an SWL), sufficient members to obtain five points if you are a VK or three points for others Contact with (or logging for an SWL) a club member counts one point and the club station, VK4WIN counts two. Fee $2.00

Annual Subscription

This is now only $7 00 There is a joining fee of $2 00 for new members. Apart from other benefits, members are admitted free to Technical Classes when these are held Subs are due straight after the AGM in May

CHARC

The first AGM of the Central Highlands Amateur Radio Club of Tasmania (CHARC) was held on Thursday, 25 May 1989, on air at 3585 at 0945 UTC

Elected Office Bearers of the coming year were

President:	VK7KZ	Bob
Vice-President.	VK7NBF	Bob
Treasurer:	VK7NDO	David
Secretary:	Sandy Geeves, wife of VK7KZ	

Two items of general business resolved were:-

1. Any member not calling in or tendering an apology for the weekly net on 3590 at 0900 UTC Tuesdays, will be fined 20 cents.

2 An award, to be called "The Tassie Trout Award", is to be instigated. The recipient of the Award will be required to work members of the CHARC of Tas to gain an overall "weight" of "trout".

The Executive members will carry more weight than members Details will be worked out in the near future and publicised in AR Awards column.

Bob Geeves VK7KZ
President, CHARC of Tasmania
28 Hamilton Street
West Hobart 7000

SILENT KEYS

We regret to announce the recent passing of :-

Mr Peter R Armstrong	VK1AX
Mr Erik W Bierre	VK2BEK
Mr Sydney Westerman	VK2ESW
Mr William Knowles	VK2VYB
Mr Ed Kosseck	VK3AKE
Mr Jim Keenes	VK3KE
Mr Greg Cusick	VK3MQ
Mr Max Lindsay	VK4HD
Mr Frank McGrath	VK4YJF
Mr Bram Gellet	VK5AB
Mr John Rankine	VK5JF

Herbert Maxwell Lindsay J P VK4HD

On 17 April 1989, yet another old-timer's key became silent. Amateur radio lost yet another of it's most ardent VHF enthusiasts, at the age of 75. Max lost his battle with an illness that lasted some eighteen months He was so uncomplaining and retiring, that even those of us who knew him best, were completely unaware of this plight.

Max first became licensed in 1935, using, as most of us did in those days, all home-brew equipment scrounged, begged, and liberated, even bought when necessary, until the cessation of hostilities released the much welcomed flood of disposals gear

A qualified accountant by profession, he was equally well versed in the electronics of the valve era Always ready to unstintingly pass on to newcomers this vast store of knowledge.

A member of the WIA from the very beginning of his association with the hobby Max always insisted that potential Hams become members also, and so help the Institute increase in strength for the betterment of all, and ultimately themselves.

A man of many skills, at first an accountant with the ES&A Bank for 15 years, before trying his hand at farming the fertile Buderim soil. Then, after a sojourn with the firm of Evans Deakin, Max entered the realm of the sugar industry First with the Mill Suppliers Association, and then on the staff of the mill itself; he spent the remaining 15 years of his working life as secretary to the Moreton Central Sugar Milling Company

Although his list of achievements in the amateur field were many, it was only with great difficulty that some of them were tracked down

WBE Certificate, CQ WW DX, 100 Consec QSO's,HCIFS, Ragchewers Club, AJD WAJA, VHF CC, W all VK VHF One was written entirely in Japanese, and therefore unreadable by us, and some were missing.

Max was a keen gardener in his retirement, growing magnificent roses - his specialty. Abundant vegetables were produced as a result of his green thumb He was an active golfer and private organist. Nevertheless, we remember Max VK4HD best of all as a courteous and dedicated Amateur

Our sincere sympathies are extended to his wife Mavis, Daughter Pam and Son Maxie.

John Purdon VK4PU
32 Hill Street
Woombye 4559

Erik Warburg Bierre, VK2BEK

His many friends will mourn the passing of Erik, who died in the Manning River Base Hospital, Taree, on May 1 after a short illness

Erik was a real old-timer, receiving his first amateur license in 1924 This was in New Zealand where he was born on April 8, 1900 of Danish parents.

On leaving school, he joined the NZ post office as a telegram messenger, later to become a post office telegraphist, which instilled in him a love of morse communication lasting throughout his life. His impeccable fist was frequently heard keeping his regular skeds right up to the end

After leaving the postal service, Erik joined the New Zealand Government Film Unit as a motion picture camera man, during which time he married Vera, an Australian Subsequently, receiving an offer from Fox Movietone News, they came to Sydney Later, he was appointed chief camera man, a job which took him to many parts of the world.

He created the well known kookaburra newsreel title and was the only one to film a Tasmanian tiger, now extinct. Much of the Australian wartime footage, now often seen on TV, was his work during his time as an accredited war correspondent

After the war, Erik left Movietone and established his own photographic company. Years later, after the death of his wife, he sold this business and went to live in a Taree retirement village.

Erik was a true gentleman, a loyal and supportive friend, always ready to lend a helping hand to all

Farewell old friend, you will long remain in our thoughts.

Bill Dukes VK2WD
44 Avlan Crescent
Lane Cove 2066

Jim Keenes VK3KE

Jim Keenes' radio activity extended over a long period before getting his amateur license in August 1947. Prior to then, in company with Col Gibson, later VK3FO and Jack Harris, later VK3ALX, all three used to visit my shack to have a yarn about amateur radio, and also to get a bit of the atmosphere of amateur radio.

When Jim got his callsign VK3KE, he used to say that he was "King of the earbashers", and while living in Daley Street Bentleigh, he erected a beam for 14 MHz and proceeded to work the world of DX, together with a lot of the local stations, becoming well known on the bands.

About 1947, Col Gibson used to hold gatherings of some of the local amateurs in his shop in Centre Road, from where the Moorabbin and District Radio Club had its beginnings.

IN 1948, an inaugural meeting was held in the Library Hall in Moorabbin, where the MDR Club was established, Jim was elected the foundation President, a position he held for two years He then said, to avoid the possible label of being run by a clique, the position should be rotated

As founding President, his work involved the establishment of the Club Constitution; being the first of the post war clubs outside of the WIA meant that there were many hours of work to produce something which was used by a number of other clubs, as a basis for their own Constitutions.

He was a first class tradesman as a printer, and for a number of years he was the manager for a large printer in Melbourne. In 1956, when TV became popular, Jim decided that if he could make money for others, he would start a TV aerial business for himself The problem was that he made such a good aerial, there wasn't enough profit to keep going, so he became a consultant to the printing industry

After his only daughter married, Jim and Edna, his wife, moved from Bentleigh to McCrae where our contacts became rather fewer, and later they moved back to Frankston, where his wife Edna died.

Jim continued to live in Frankston, where we made contact, both in person, and over the air occasionally

Our last personal contact with Jim was at the M&DR Club 40th Anniversary get together, and although he was using a stick, he looked well.

He was the guest of the Moorabbin Radio Club for the day, being the founding President, so we were all very surprised, shocked and very unhappy to hear of Jim's passing.

To daughter Beverley, her husband Jim and family, we extended our sincere sympathy as you have lost a fine father, and we a fine friend.

Vale Jim Keenes VK3KE

Ed Manifold
VK3EM

Noel Ericsson, VK2MF

It is with regret that I report the passing of Noel Ericsson, formerly VK2MF on 10 April 1989.

Noel was born at Hull in England in 1909. His parents came to Australia and settled in the South West of Western Australia

He was educated first at Nangabrook public school, and furthered his education at Wesley College It was here that Noel decided to make Radio his career. He came to Sydney as a student of the Marconi School of Wireless and qualified as a Radio Officer, obtaining his second class and later his first class Commercial Operators Certificate of Proficiency

After many years at sea, from about 1928 to 1941 serving with companies such as P and O, Union and Adelaide Steam Ship, he decided that it was time he took a shore job and settled down In the earlier part of the above service, he was unfortunate to have been shipwrecked when employed as the Radio Officer on the trawler "Gunandaal"

It was reported by the "Sun" newspaper of the time with words to the effect that the trawler "Gunandaal" ran aground on rocks about a mile south of Cape Howe, the southern-most point of the New South Wales Coast, at about 2200 hours on Sunday night November 3 1929. An SOS was sent by Noel on 220 metres.

It took only 10 minutes for the engine room to flood and all power for the wireless ceased It was then that the youthful Noel displayed his resource. Attaching an ordinary light globe to his 345 volt battery, he succeeded in improvising a morse signal lamp, by means of which he was able to direct the movements of the steamers "Memoo" and "Saros" which had hastened to the scene after hearing his SOS call

The "Memoo" and "Saros" were unable to effect a rescue due the close proximity of the rocks. Nevertheless, it was the youthful (19) Noel's improvisation of the signal lamp, and the answer from "Memoo" and "Saros" by lamp, that gave the crew comfort to await in the murky darkness, or take their chance in the sea, as the lifeboats were destroyed on the first impact

This was an experience that young Noel would not easily forget. His first and final job ashore partly fulfilled his career interest in Radio, when he joined the Department of Civil Aviation (DCA) as an Aeradio Operator, later known as Flight Service Officer, whose duty it was to supply Air Traffic information, and Ground to Air Communications to civil and sometimes military aircraft

His service with DCA was at Lord Howe Island, Rose Bay - Flying Boat Base, Alice Springs and finally Kingsford Smith Airport, where he was stationed until his illness and retirement in 1970

Noel's other activities included election as a Governing Councillor of the Union representing Professional Radio Employees, which covered industrial awards, such as Overseas Telecommunication (OTC), DCA - Technical and Communications, Meteorology and many others. It was during this period that he became the foundation editor of the Union's information circular-journal known appropriately as "QTC".

About the year 1960, still with a desire for extra radio activity, he became interested in Amateur Radio. He applied for a licence and was allocated the callsign VK2MF He operated this station with an FT DX400 and a Hustler 80 metre to 10 metre trapped vertical antenna This period of activity on the bands made him many new friends and lots of DX was worked as his many QSL cards reveal

During his retirement he was most active in the St George Youth Radio Communication Service Annexe, operating from his home QTH, using his equipment for practical demonstrations and general theory, enabling some 100 students to qualify for their ham tickets His class 1975 won a pennant for NSW I feel sure that Noel has fulfilled the ambition of many of us, having aimed at, and successfully achieved, a wide and varied career in radio, commercially and as a hobby He is sadly missed by his wife Stella and family, and his many friends that he made during operating as VK2MF in the hobby that knows no boundaries, that creates international friendship and goodwill. The hobby we all know so well - "Amateur Radio"

Ern Brown VK2AJ

Frank McGrath VK4YJF

It is with regret that we advise the passing of Frank VK4YJF We convey our deepest sympathies, on behalf of the Wireless Institute of Australia to wife Bety, and family of the deceased.

OBITUARIES

John Rankine VK5JF

John Beddome Ranking became a silent key on 21 May 1989 at the age of 67. He trained as a professional brasspounder at the Marconi School of Wireless and embarked on a maritime career when the U-boat war was at its peak, keeping radio watch on merchant ships in convoys around the world. He survived torpedo attacks, and after WWS ended, he returned to South Australia to work in other branches of radio. He founded a successful recording and servicing business in Adelaide, FARR Electronics, which lasted 25 years.

His operating ability and interest in radio soon led him to become an amateur operator, and scarcely a day in the past 40 years passed without a contact.

His interest in the Malay and Indonesian languages, which began when, in the Merchant Navy he visited Malaya, led him to make contacts with amateurs in south-east Asia. Regular skeds became a daily net on 14 MHz which he named the "kangarudarimau" net, from kangaroo, for Australia; the garuda, the symbolic bird of Indonesia;and rimau, the Malay tiger; thus symbolizing the three nations involved.

Many of the participants became John's personal friends, staying with or visiting him on visits to Australia, which were reciprocated on trips to south-east Asia by John and his wife Barbara, when callsigns and voices became real people who extended very genuine hospitality to their visitors from Australia. Many VK amateurs must have heard John operating the net from Indonesia, with Barbara also contributing with a competent microphone technique.

On at least one occasion, he worked the net "Airliner Mobile", using the radio installation of a Garuda airliner through the courtesy of the friendly Indonesian Captain. John's extrovert personality, with drive and enthusiasm in everything he did, will be missed by his family and many friends in the amateur world. He pursued a wide range of activities such as slow-scan TV, movie-making, and videotaping, as well as "home-brewing" in which his practical ingenuity was put to good use. He was no mere black-box operator, as the numerous items of home-brew equipment which filled his shack testified. Some of them were highly unconventional, but they worked.

Peter Thomas VK5ZPT

JA (Bert) Cusick VK3MQ

JA (Bert) Cusick was one of the veteran operators, receiving his call in 1939. He served in the Armed Forces during the Second World War in the 3rd Division AIF Signals Corp, and then went on to make a career of his interest in the Department of Supply (Army Inspection).

Upon his retirement he continued to look after his wife Grace and five children while maintaining an active interest in his hobby.

With his quiet, unassuming nature, he brought a number of relatives and friends into the hobby. His distinctive voice and fist will be long remembered.

Greg Cusick VK3BRQ

OVER TO YOU

Equipment Circuits Wanted

Assistance is needed for our project aboard HMAS Castlemaine Corvette-Minisweeper WWII, now "Maritime Museum Memorial Ship" and the only one left afloat of this "Bathurst Class of RAN".

Our radio room requires handbooks, circuitry and so on, if available now, for following :-

Radar Sets A272 and A266PPlus Plans of Antenna Used

Radio Receiver B40 handbook and other knowledge

Mf AWA CI6940

HF AWA CI6940

HF Transmitter RC8AWA

Main Transmitter AWA 18J 5385

Emergency Transmitter AWA K5394

Motor Alternator 220/240V 50 Hz, 240V 500 Hz

DF Receiver AWA C143A

The RNARS runs VK3RAN aboard HMAS Castlemaine when our members are available, using their own gear, as no transceiver is aboard. I am a member of the radio station as SWL-Co-ordinator as 4th deck officer MN (ex WWII - Atlantic and Mediterranean Zones) and duty-security officer aboard.

Also I am a member of RNARS

Hopefully in September 1989 we will move ship for full flash up, both boilers, 2/1000 HP steam engines- triple expansion

In August 1991 our 50th Anniversary, we hope to take her out down bay on Anniversary Cruise with RAN-Maritime crew, plus special guests.

Addison Lowes
PO Box 305
Heidelberg
[illegible]

Let's All Pay Up!

This letter is directed to all members of the WIA. Recently I sent my subscription away and became an Associate Member of the ARRL in the United States of America. The main reason for joining was to receive their monthly QST.

Upon perusing this very well presented magazine, I came across a few words at the start of the Ham-Adds column which caught my attention and interest. These words said, to quote, "Ham-Adds will cost 25 cents per word to all members".

My personal opinion is that the WIA should also adopt a format for the Ham-Adds column based along similar pricing structures as those used by the ARRL in their magazine.

A quick check of a recent edition of AR magazine, coupled to a little bit of mathematics, showed that an income to the WIA in excess of $12,000 per year would not be unjustified, if the system were to be implemented. This would be equivalent to having 172 new members join the WIA at the proposed new membership fee of $70 each.

This revenue could be channelled back into AR magazine to help pay for a better quality paper stock than the present material. An interesting suggestion, don't you think?

David G Barneveld VK4BGB
PO Box 275
Booval 4304

Radar at Mount Lofty

I am writing to you about Eric Jamieson's VHF/UHF column in the May 1989 issue of Amateur Radio.

Under the heading of "RADAR" Mr Jamieson ponders the possibility of a proposed CAA facility in the Mt Lofty Ranges being associated with Bureau of Meteorology wind shear radar.

I would like to assure Mr Jamieson, and your readers, that the proposed facility will serve one purpose only; as an International Civil Aviation Organisation (ICAO) standard Secondary Surveillance Radar (SSR). There is no association with the Bureau of Meteorology, or any other organisation, in establishing this facility.

The "chirp" every 12 seconds which is experienced with audio and computer equipment in the vicinity of Adelaide Airport is caused by the 2 MW Primary Radar, and no interference has been recorded from the low powered SSR installation.

SSR operates on 1030 MHz transmit and 1090 MHz receive, has a peak power of 2 kw and a very low duty cycle. The purpose of the facility, besides to determine aircraft position, is for the communication of identification and altitude data from the aircraft for display to Air Traffic Controllers.

We are currently going through the exercise of explaining the facility to the concerned residents of the area, and the publication of a rumour that could have been easily dispelled with a phone call, does nothing to assist in a reasoned evaluation of the proposal.

Chris Howell
Navigation Aids and Radar Engineer
Civil Aviation Authority
SA/NT Region

Mobile Telephone Ban

On reading AR and listening to the VK2 broadcast, I have been very disappointed with what seems to be a very disinterested and head-in-the-sand attitude towards this threat to

our mobile privileges

It has rated only one mention a couple of weeks ago, and nothing since. There has been no indication of any action by the VK2 Division to counter this threat.

I cannot believe that intelligent people on our VK2 Council are so naive as to believe that, if the present plan to ban headphones is implemented, it will not be extended to ban microphones as well — ultimately. You trust politicians more than I could credit.

"In the entire history of (hu)mankind, no government has ever willingly given a freedom or right to its people, they have always had to fight for them." *(Abraham Lincoln)*

The petitions, etc, have been receiving good support up here from amateurs, CBers, the Taxi Council, commercial users, truckies, etc, and many other varieties of radio users who are alarmed by this pointless imposition. I hope they are being as energetically promulgated in the metropolitan area.

John Alcorn VK2JWA
33 Spring Street
Lismore 2480

Fee Rises

On this matter, congratulations to the VK2 delegates for refraining from voting and returning for direction from our members and executive

The proposed increase in Fees will lose the WIA members. When I became Treasurer of the Summerland ARC about ten years ago, we had over 80% WIA membership, this has reduced over the years, until it is now under 50%. The almost universal reason given for not renewing is the increasing fees.

It is obvious to blind Freddy that with increasing commercial pressure worldwide for our frequencies, without strong political lobbying, AR may not be around much longer. In a lot of countries, AR is insignificant, or illegal, and the commercial value of our frequencies is an immense lure for politicians

We have the largest frequency block allocations outside of the Armed Services. The excuse given for this allocation has always been our value in emergency situations such as backup communications services. This was once true, it may even still be, but it is no longer perceived as such by the public (read "voters"), and hence, by the politicians. It is not even taken seriously by amateurs, hence WICEN's present state

To minimise the necessary fees, the WIA must rationalise its services, especially those which do not recover their cost of operation. Federal Council is one such service. Because of its importance as a SOS (Save Our Skins) operation, Federal Council should be a watchdog to liaise with the DOTC and to lobby or pressure its political masters as needed.

Federal Council should co-ordinate policies derived from the Divisions and present these to the DOTC/Government.

It should watch for, and react to, threats to our bands from commercial or political pressure groups (who will be much better funded that we will be). This would include international representation in WARC's etc.

Financially, this would be a total loss operation, and should be shared by all members equally. This should be the only reason for the Federal levy. However, as this also affects all users, members or not, a continuing "Fighting Fund" should exist, which should seek support and donations from allied organisations, businesses, amateurs (WIA or not), indeed from everywhere

This would need promulgation by all methods, AR, other mags, Clubs, nets and newsletters etc. As propagandists, amateurs are truly amateur in our attitude and methods.

Many non-WIA amateurs may be willing to support such a fund to fighting for our survival, reducing the cost to Members. Federal Council should not get involved in other costly services that might be better provided to Members by the Divisions.

As for services, these seem to be better provided at State levels by the Divisions, who then set their Fees to suit. Services should be where possible on a user-pays principle.

Charges should be calculated for all such services at cost, or slightly less, for Members, and at cost plus profit for non-Members. The net service should be at not less than cost, and if possible at some profit to the Division as a part share of general administration costs.

By doing so, various services would be paid for by those who use them, and the General Fee could be reduced, which might induce more amateurs to join and support the WIA.

Now, to "Amateur Radio" — the same should apply here.

The cover price of AR has been kept very low, because very precise print runs are possible, due to exact circulation figures. The vagaries of news stand availability produces a need for considerable wasted over runs, the costs causing a much higher cover price as seen on such publications

A compromise is possible. AR should be available as an optional subscription, and not as an obligatory inclusion in the annual Fee. AR should also be available to non-Members by subscription as well. Being on a subscription basis, this would still provide accurate figures for economical print runs. AR should be autonomous and self funding. I suggest three subscription levels :-

For Members, with Annual WIA Fee:Cost, plus Slight Profit (CPI)

For Members at other times:An Intermediate Rate

For non-Members:Cost, plus Commercial Profit Margin

If required, rates could be pro-rata to renew on the next January. Once it was argued that all this was too difficult. This is no longer valid, a piece of cake now for the most miserable computers and programs.

Subscription losses of Members who think they can't afford the combined Fees might be compensation by outside subscriptions. AR should make a profit which could be allocated to :-

- The magazine for its future development, or
- Pro-rata by circulation figures to Federal and Divisions.

Whatever system is adopted, the Renewal Notice should show full details of the charges, ie Federal, Division and AR

Amateurs, like the rest of Australia, must realise that there ain't no such thing as a free lunch. We'll get what we pay for, and we'll get what we deserve from the politicians.

John Alcorn VK2JWA
33 Spring Street
Lismore 2480

Contest Rules

I sympathise with VK4AIM ("Comments" AR May 1989), when he bemoans the passing of big-time field day contests in VK. I too, remember going portable with the radio club, taking beams for 20, 15 and 10 metres, linear amps for all bands, working flat-out for 24 hours, making hundreds, even thousands of QSO's.

But, these days, along with the rest of the operators with whom I went portable for the John Moyle Memorial Field Day Contest, I feel, "what's the point?"

Here we are, almost at the peak of the next sunspot cycle, and field day rules do not allow contacts with DX stations other than ZL. On 20, 15 and 10m!? They've got to be joking!

Furthermore, it has become trendy for successive contest managers, almost by divine right, to chop and change the rules of every VK contest at their whim and fancy, and then, more often than not, publish these rules in only one issue of AR before the date of the relevant contest. Some contests, in particular the John Moyle contest, are so confusing, have so many sections, and are so irrelevant to the real capabilities of each band, that it discourages many operators from entering. Just compare the number entries for this contest in 1980 to the last one.

My suggestion to the contest manager is to revert to the rules of ten years ago for the John Moyle contest; and for contests in general, to keep the rules simple, give plenty of warning of rule changes, and above all, maintain some degree of stability in rules from year to year.

All the above, notwithstanding, I have a very high regard for the Federal Contest managers, past and present, and I do not envy their task. They are in the unenviable position of sticking their heads above the trenches, with the inevitable result of having them shot off

Charlie Gnaccarini VK3BRZ
66 Smeaton Close
Lara 3212

Operator Wanted

May I, through your correspondence letter pages, acquaint your readers with Savusavu Marina operations in the South Pacific Fiji Islands which will require, in due course, the services of an amateur radio operator

We are developing a marina on the second largest island in the Fiji group at a small town called Savusavu, which is in a particularly beautiful area. The marina will service the 600 plus yachts that cross the Pacific every year, most of whom operate a "ham set" and talk on "marine nets"

A retired person or couple might find this of particular interest and could write to me at my English address.

VHF and the official maritime bands such as 2182 and 6215.5 will also be operated.

Robin Irwin
Barton Grange, Corfe
Taunton, ENGLAND

Membership Subscription Rates

Times are tough at the moment, especially for those of us paying off a mortgage, (no need to get out the violins!), and with the cost of living increasing all the time, a lot of the luxuries will have to be "put on hold" Hopefully, only temporarily

I consider subscription to the WIA one such "luxury", maybe one that a lot of us will have to do without in the near future. In fact, unless the subscription comes down substantially, then I for one, will not be renewing next year Even though it's only a matter of $50 (?), it's $50 that can go towards other necessities

Now, if you're reading this and thinking along the lines of . . . "aren't our Amateur bands worth $50 a year to save", don't bother replying in these pages, as I would rather see the magazine full of interesting articles, rather than the jibberish sometimes presented to us in these "Comments" pages

Now, while we're on the subject of cost, how much will subscription be next year? On the Information page (page 3, AR May 1989), we can see that for full membership in Victoria the cost is $50, mind you this is also the dearest rate for anywhere in Australia(?) Now upon flicking through the magazine, I noticed on page 34 a piece entitle "Changes to Membership Arrangements" Point 3 is, and I quote: "that the recommended subscription rate from 1st July 1989 be set a Division component of $23 (subject to Divisional ratification), and a Federal component of $47"

What does this all mean? Does it mean the membership will be $70? You've got to be kidding! That's way over the top, considering most of us subscribe to obtain a copy of AR and nothing else, and how many of us are up at 10 o'clock on a Sunday morning to listen to the broadcast? Obviously not Peter O'Connell who wrote the article "How to Record the Weekly Broadcast"! In my three years of membership, the only other service I have called upon was to obtain a copy of the booklet "Guide to Antenna Mast Applications", which by the way, is very informative and well worth a look for anyone thinking about putting up a tower, sorry, a mast.

Dare I suggest a cheaper subscription rate for those of us who are not interested in the other services available, and when the time comes when we do require them, it can be on a "user pays" system, like a lot of other services in our community? You never know, membership might increase dramatically if it were more attractive to join. Let's face it, wouldn't it be better for the Institute to have more members paying a lot less, rather than, less members paying a lot more?

Incidentally , Jim Linton VK3PC wrote in his "By the News Editor" column for May: "...in commercial terms you could expect to pay around $40 to subscribe to similar magazines... " This obviously assumes that you're buying 12 or 13 issues a year, but remember, if there's nothing of interest in a magazine for that particular month, then why bother buying it at all?

Adam Maurer VK3YWV
1 Jeffrey Street
Dandenong North 3175

We don't agree with your assertion that most members only require AR, Adam, but you are entitled to express your view! — Ed.

Amateur Radio -vs- CB Radio

I was first licensed as VK2AEW on 23 January 1953. I was active for the first three months, then put it away for about twenty years, because of study and work commitments. (I was only 18 years old at the time).

I came back to Amateur Radio in 1979 on MF/HF and 144 MHz, and have been reasonably active on the amateur bands ever since. Recently, I have taken to CB radio on 27 MHz SSB, and have made more friends on CB in the last six months than on Amateur Radio over the last ten years!

I wonder if this is because CB radio has recognised and used call channels which HF Amateur Radio has not. In my letter published in the April issue of AR I canvassed the idea of "optional channelization" of frequencies for HF Amateur Radio operation. (Also for the exclusive use of USB) I wonder if there has been any feedback about these two issues?

Although this letter is apparently directed to CB operators, many members of the WIA are both licensed amateur operators and licensed CB operators. Indeed, my own CB Club, the Sydney Radio Group (not yet incorporated) has six licensed and very active amateur radio operators

The distribution of the amateur licenses is :-

(a)	Unrestricted License	2
(b)	Limited License	2
(c)	Novice License	2

These are my suggestions :-

1 CB 27 MHz AM radios be restricted to channels 1 to 20 with their present carrier power of 4 watts.

2 SS 27 MHz CB radios have exclusive use of channels 21 to 40 with transmission on upper side band only.

3 Nineteen new 27 MHz CB channels be created between channel 20 and channel 40 with a spacing of 5 kHz

4 The maximum power of 27 MHz for SSB CB radios be increased to Novice Amateur Radio power, that is, from 12 watts PEP to 30 watts PEP, an increase of 4dB.

5 That consideration should be given to the idea of establishing five exclusive FM channels on 27MHz CB frequencies, possibly channels 16 to 20.

John Robinson VK2AEW
203 Tryon Road
Lindfield 2070

Amateur Radio is a Hobby - Or Is It?

In any hobby one starts from a simple basis, and by application, expands to greater personal achievements. One can't start with a "four minute mile".

Our structure contains a few elements to encourage this. We provide no real scope for the co-operative practice of Radio techniques. There is enormous scope for communications - mainly via refined commercially made equipment. progress in radio and commercialisation has led to this up-swing — probably inevitable, currently unstoppable and having some merit. A minimum of change will accommodate our "communication arm" as it proceeds to packet radio and inevitably to FAX - Instant QSL's shades of Polaroid cameras!

We could nurture an area of active radio practice with a few small segments of frequencies devoted entirely to home constructed equipment. I include kit sets. If you can build it and de-bug it, you have one foot in the door! I do not think all bands would be necessary - 3.5, 10, 18, 50 and 1296 would give adequate frequency scope, and have little impact on existing equipment, especially pre-WARC. A 30 kHz slot as a divider between models would be adequate.

This is merely an extension of the original P/CW split to accommodate a new/old facet of radio! The regulations should remain the same for the quality of transmission, but be less stringent on the means of achieving it. If we want our hobby to retain a profile in radio techniques, it must be fostered and we, the WIA, must lead the way for DOC to listen.

It cannot be too bad to follow a trail pioneered by Max Howden and the thousands that followed his lead You can always QSY and compete with global factory products in another competition, chase another country, zone, or certificate, etc, or happily exchange techniques with other DIY operators whose interests are in this aspect of our "Hobby", Amateur Radio.

Robert McGregor VK3XZ
2 Wiltshire Drive
Somerville 3912

Radials for Vertical Antennas

The fifty year old theory .to have as many as 120 radials buried in the soil, is being challenged Computer analysis has found that four above ground radials are more effective, provided that both the radiator and radials are above ground level at distance of between three to six metres. On an average ground conductance, a height of 4 5m for 3 8 MHz gives a far better performance than the usual on ground and underground 120 radials Se also, QST for August 1988, Elevated Vertical Antenna Systems by Al Christman, KB8I

Translated by John Aarsse VK4QA from Electron, March 1989

ar

Correction!

I have read "Signals Reflected via Aircraft" in "AR" for May.

There is an error which needs correcting because it changes the phase of the particular point by a full 180°

In the Appendix (1), third sentence reads:

"This *appears* when the reflected signal assumes massive predominance, (etc, etc...)"

This should read:-

"This *disappears* when the reflected signal assumes massive predominance, (etc, etc...)"

Otherwise it all seems fine. Thank you.

Gordon McDonald VK2ZAB
59 Wideview Road
Berowra Heights 2082

More on Aircraft Enhancement

In your May issue, Gordon McDonald, VK2ZAB, accuses me of adding to the body of myths, furphys, half-truths and plain nonsense existing in amateur radio lore. He finds no fault with the argument I presented in the March issue which prompts him to make the accusation, but attempts to debunk it by exception, using a mixture of overt scorn and bad mathematics.

The mathematics presented by Mr McDonald may appear plausible to the non critical reader, but in practice they are simplistic to the extent of producing results which are seriously in error.

In presenting his maths, Mr McDonald both assumes that the Earth is flat, and ignores the 900 feet difference in elevation between the aircraft and "prism". However, the Earth is round, and the aircraft and "prism" follow circular trajectories with respect to the baseline of Mr McDonald's diagram. The aircraft elevation may be assume to start at 12km, whilst over the VK1BG QTH, but if so, it peaks at about 15.7km over the centre point of Mr McDonald's baseline.

If we assume, for the moment, that there are interfering signal paths, as Mr McDonald proposes, and correct his maths as suggested above, then we find that the difference in path length generated by the first 22 km of aircraft movement is about 6.38 metres, not 12.48 metres, as Mr McDonald calculates.

Wave cancellation takes place only once per wavelength, not twice as asserted by Mr McDonald.

Thus, the perceived beat frequency in the above situation would be about 1 in 10 secs. on 432 MHz (not 1 in 2.5), and 1 in 30 secs. on 144 MHz. This can hardly be called "flutter" - and on 2 metres, the band both VK2ZAB and VK1BG make the most use of, it would be called slow QSB and would be regarded as normal! At the limit of range at which VK1BG can "see" the aircraft (some 68 km beyond the centre) the beat on 2 metres still only works out to be about one in 5 seconds.

There are other problems with Mr McDonald's argument.

First, for significant interference to be noticed between two signals from the same source, but arriving over two paths, they must have approximately the same amplitude. Some years ago, during a social visit, Mr McDonald was good enough to calibrate my "S" meter for me. As a result of that exercise, we established that there was a discrepancy of almost 14 dB between his calculated signal strength from VK3UM and VK1BG on 2 metres, and that actually occurring, (he has not since been able to explain why the signal is so much stronger than he would have predicted). With a difference of such magnitude between allegedly interfering signals, it is most unlikely that interference would be noticed at all.

Second, Mr McDonald's "flutter" argument seems to be based on CW signals, not SSB as is normally used for aircraft enhancement work. The circuit between VK3UM and VK1BG is long, compared to a wavelength at 21 metres - in fact, there are in excess of 210,000 wavelengths involved at 144.2 MHz. If a signal at precisely 144.2 MHz happened to arrive via 2 paths in exact antiphase at the Rx, then signals about 345 Hz above and below this frequency would be in phase, and reinforce. Thus, in the passband of a normal SSB receiver there would be several adding, and several subtracting frequencies all at the same time.

To the ear, on a normal SSB signal, the effect of a slowly changing two path system over such a long circuit would be a slow change in audio quality, and the non-critical listener would probably not notice it.

Finally, the hot aircraft wake crosses the "line of sight" path from the aircraft body towards the horizon directly to the rear. Attenuation of VHF signals due to refractive scattering on this signal path would result, further reducing the potential for noticeable interference between aircraft path, and prism path signals. In other words, the wake tends to shield the aircraft itself from RF. Therefore, under the special circumstances described in my article, the wake acts to inhibit Mr McDonald's reflections from happening at all.

Like Mr McDonald, I have better things to do, and would rather not engage in further fruitless dialogue with him on this subject. As I have said to him privately, I am grateful to him for his early assistance in refining the theory presented in the March issue.

He has been consistently and resolutely opposed to the notion of a hot gas supported mode of propagation, and has, therefore, acted as an excellent critic by being very quick to point out any flaws in my reasoning. But his counter arguments now boil down to the contention that I am trying to present something new, and that, because he has not seen the phenomenon previously reported, it cannot exist. In fact, there is nothing new in what I propose - it's just a linkage of ideas gleaned from some pretty old text books.

For the record, the word "forthright" in my article, to which Mr McDonald seems to take exception was not mine. At that place in the text my draft used the word "bruising"; from the tone of his article in the May issue, you will understand that my choice of "bruising" was no accident!

Ian Cowan VK1BG
13 Mainoru Place
Hawker 2614

HAMADS

TRADE ADS

RADFAX2 Hi-Res weather fax, morse & rtty receive program for IBM PC/XT/AT. on 360K 5.25" floppy & full Doc Need CGA, input port, SSB HF FSK/Tone decoder. Has re-align auto-start view save print. Also "RF2HERC" same as above but for hercules card, and "RF2EGA" for EGA card (640 x 350 mode) Programs are $35 each and $3 postage ONLY from M. Delahunty, 42 Villiers St., New Farm 4005 QLD. Ph. (07) 358 2785.

AMIDON FERROMAGNETIC CORES: For all receiver and transmitter applications. Send large SASE for data and prices to RJ & US IMPORTS, Box 157, Mortdale, NSW 2223 **Closed during August.** (No enquiries at office please . . . 11 Macken St , Oatley) Agencies at: Geoff Wood Electronics, Lane Cove; Webb Electronics, Albury; Electronic Components, ACT; Truscott Electronics, Vic; Willis Trading Co., WA; Associated TV Service, Hobart.

FOR SALE - NSW

FL2100B HF linear $1100. FRG7 rcvr $170 TR2200A 2m FM TRCVR $110. All in good working condition. Dave VK2BRA QTHR. (02) 4871840 AH.

BWD 509B CRO with probe and handbook. Ray VK2FW QTHR after 5pm. Ph: (02) 624488.

WIND-UP TOWER 3 sections 20m. Yaesu FT107M. Kenwood SM220 monitor 3 elements 10m and 15m. VK2VE QTHR (02) 4494960.

FT101 C/W MIC HANDBOOK. Spare, finals, good order. Late model. $350. VK2BDT QTHR. (049) 215036.

YAESU FT707 HF TRANSCEIVER workshop manual, owner's manual, MH1B hand mic. Good cond. $700. Phone Dave (043) 676629. VK2FFK QTHR

AT PORT MACQUARIE RADIO CLUB field day Long weekend in June. Very reasonable prices being charged due to the no commission charged on "disposals". Number of high-voltage 3000-volt working 20 MFD block capacitors, ideal for high-voltage power supplies Wide-spaced tuning condensers, lots of WWII disposal gear Phone Brian, QTHR. (066) 556135.

YAESU YO100 STATION MONITOR, mint condition, C/W cables, $375. Phone Ray VK2AWQ QTHR (064) 941347

TELEREADER GWR685A GW/BAUDOT/ASCII, complete with keyboard and display screen on main unit, $650 ONO. VK2ETF (049) 454989

YAESU FV-107 EXT VFO, $100. Webster band spanner 80-10M mobile antenna, $200. Yaesu FT230R 2M transceiver, $450 ONO. Ph (063) 675095 Peter VK2DBI QTHR

YAESU FT DX 400 ext vfo and manual, $300 Yaesu FT 227R and manual, $200. Yaesu FT 7 and manual, $350 CPI linear amp 10-80 metres, $100. T/S 323 UR heterodyne freq meter and manual, $40. Gertsch heterodyne freq meter and instructions, $40. Ph: (02) 6051993

YAESU FT101E, good condition New driver and finals. YM34 Yaesu desk mike, price $500 Contact Peter VK2DBI QTHR (063) 675095.

KENWOOD TS811B/70 CM TXVR, all mode, few hours use. Warranted $1150 Yaesu FRG/7700 FRT7700 RX/ATU VGC, $550 Aerospace 70cm/18el beam, $95. VK2AHD (069) 211004.

YAESU FL2100Z LINEAR, $1195. Two section telescopic tower 17M, galv complete, $785. First class. VK2ECR. (02) 5229784.

FOR SALE - VIC

DSE COMMANDER 2m transceiver kit (Cat K-6306) unassembled. In original unopened carton, $150 plus postage. Ralph VK3CQK. (058) 521372 QTHR.

4W QRP TX 3535 CRYSTAL Good order, complete with VFO, $60. VK3CK Don QTHR (059) 873950.

EMTRONICS EAT-300 antenna tuner, as new, used only once, $150 Roth Jones, VK3BG (03) [redacted]

NALLY TOWER, buyer to dismantle, $500 Rotator Toyamuro KR-400, $100. Power supply Icom PS-15, $150 Antenna tuner MFJ-941B, $80 EW paddle bencher model, $100 Keyer AEA model MM-2 with memory and beacon facilities, $120 Speaker Yaesu SP-102, with 5 built in filters, $75 Antenna tuner, Kenwood AT200, $80. 100W dummy load, $30 Stan VK3BSO QTHR (03) 7873479.

ICOM IC730 solid state transceiver (WARC), C/W manuals and HM10 scanning hand mike. Comes with audio CW filter (Icom), not installed. VGC. $850. (054) 721455.

YAESU AUTO ANTENNA tuner FC757AT, $400 Neil VK3CNT (03) 7546410.

AR88 RX, in going order, $150. Hallicrafters SX73 RX - 540 kHz to 54 MHz, exc cond, $250 ATN 2MX 13-element beam - 17.3 dBi gain - brand new, $150 13.6 volt (adjustable) 30 amp pwr supply New $300 Frequency counter 20 MHz/200MHz, dual range, $50. VTVM Trio VT121 1mv to 300v FSD, $50 7-metre self-standing portable mast in carry case, $100 Harold L Hepburn VK3AFQ QTHR Ph: (03) 5962414

KENWOOD TS520S HF TXVR 240V/12V AC/DC, DG5 digital readout, AT200 ATU, SP520 spkr, mic, spare finals, VGC Orig boxes and handbooks, $850 the lot. VK3CCB Cliff, phone (065) 235778.

FRG7 YAESU MUSEN COMM RCVR, $300 or best offer. Handbook and good order 1 Birko transformer soldering iron unit, $10. Multimeter VF370 tester, Arlec, $20 Apply Addison Lowes, 45 2802, or 4/74 Handon Street Heidelberg.

YAESU FT-7B with YC7B digital readout, $500. Also Yaesu gutter mount antennas for 80m 15m and 2m, $50 VK3PCJ, 16 Langford Street Merwell 3840.

PAIR NEW RCA 4-125A with sockets, $90. Brand new boxed ITT 813, $45. 813 sockets, $15. Fil trans to suit pair 813, $25. 300PF 3KV silver-plated cap, $75. 30µH roller inductor, 2in diam, $50. Qty parts to build high-power amps, inc high-voltage caps etc. VK3GY QTHR. (03) 7894363

STANDARD HANDHELD C500, 2 metres, 70cm, including charger and 2 Nicad batteries, all as new in box Ph (051) 992811

BARGAIN IRCs WIA members only See details in the Awards Column in this issue of AR.

FOR SALE - QLD.

YAESU FT707, FP707, FC707, FV707DM and base station rack, all in PC Will not separate, $1600 Ph. (071) 851240 AH, VK4VGS Pat.

COMMUNICATIONS RECEIVER, Realistic DX400 AM/FM/SSB direct entry keypad. Digital readout. Little use Still in box, $190. Ph. (071) 851240 AH, VK4GS Pat

YAESU FT102 classic rig, in exc cond 160-10m Extra filters, handbook and service manual. Original owner. Will accept $1050 Ph. (071) 947443 John VK4WLX QTHR.

MICROWAVE MODULES MM432 transverter 432/144 SSB transverter, $200 Microwave modules MMC144/28 converter, $50 Both as new Geoff VK4KGE QTHR (071) 6211877 AH, (0771) 621499 BH.

DISPOSALS GEAR FOR SALE at auction, North Queensland Convention, Townsville, September 22/23/24 PO Box 964 GPO Townsville 4810 for details.

48FT GUY MAST in 6ft sections Fully galvanised, no rust, includes guy wires, nuts, bolts and baseplate. Contact Henry VK4KF $380

ONO. Ph: (07) 8821193.

UHF/CAVITIES FREQ 400-500MHz 70db isolation, $250. VHF/cavities high band, set of six, $950. Tokyo hypower UHF/linear HL12OU, $550 THP. ATU $250. Dick Smith rotator, $100. Offers considered. Mick VK4BMT. (071) 982176.

KENWOOD TS94OOS auto ATU spotless condition, consider trade-in T/S140, TS680 etc. Mike Haagsma VK4KCF QTHR. Ph: (07) 2847739.

YAESU FT101ZD transceiver SP901 speaker YV844A microphone plus FL2100Z linear. Exc cond. $2000 the lot. Ph: Roger VK4CD QTHR (077) 740221 AH.

FOR SALE - SA

ANTENNA, four-element cubical quad for 10m and 15m, $150 ONO. VK5KBE. Ph: (08) 2507259.

TELCON SEMI AIR SPACED twin coax cable, 2kW to 2m. Transmitter, 6V6G OSC 6V6 dblr 807 buffer, 829B PA, 160 to six-metre. Transmitting tubes 46-5A, 4E27 (813), VCR139 and socket. Grundig reel-to-reel recorder (valves). Two sets tubes for KW2000. Post-war tubes, receiving & TV. Admiralty Handbook of Wireless Telegraphy 1931. VK5LC QTHR. Ph: (08) 2716841.

BENDIX TA12B aircraft transmitter, original WWII surplus condition. Enquiries to Keith, ph: (08) 3566184.

YAESU 290R 2M all mode portable, with nicads, power supp/charger and 30W Alinco linear, $520. Philips FM806 2m mobile, with REP7000 and 147-575, $150. Commodore 64 late-model keyboard and power supply, $220. Phil VK5AKK QTHR (08) 3815427.

FOR SALE - TAS

ANTENNA TOWER 9MX high, square section welded steel construction, suit rotary beam to 14MHz, $250 ONO. Details phone Roy VK7EZ. (003) 834589.

R71A COMMUNICATIONS RECEIVER for sale, mint condition. Ph: (004) 313020.

SWAP - VIC

FANON COURIER SSB 24-channel CB converted to 10m band, for 40-channel SSB CB. VK3BLV QTHR. (03) 782 1983.

TO SWAP - Kenwood antenna tuner AT200, for a Kenwood antenna tuner AT1805 to complete a TS180S base station. Chris VK3CXP QTHR. BH (03) 3284849, AH (03) 3665060.

WANTED - NSW

YAESU FL2100, in good cond - valves not needed, for project. Contact Scott VK2JSR QTHR or (066) 295127 after 5pm.

SWAN 100MX, Astro 200, Atlas 215/210X. Need not be working. Allan VK2EFM, (066) 532463 or (02) 6638161.

DUMMY LOAD capable of 750W CW for 5 minutes and 2000W PEP for 1 minute. Will pay freight. FT-902DM or FT-902D. Must have 600Hz CW Xtal filter fitted. John Robinson VK2AEW QTHR. Ph: (02) 461091.

WANTED, VALVES TYPE 7094. VK2ZEV QTHR. (02) 6451078.

WANTED YAESU FC901 antenna coupler, top condition. Alf VK2API QTHR. (044) 711381.

FTV107R, SP107P, FP107E, all ivory faced. EAT2000. Ph: Ken (02) 5195669 AH.

VIC20 COMPUTERS AND MONITORS needed by a school group into robotics. Help some kids to help themselves.
Dave VK2KDW, (02) 6303139 bus, (02) 4842596 AH.

CIRCUIT DIAGRAM COMPONENT values etc. Collins ATU. Model unknown. Contains variable inductor HV/variable capacitor 2 ceramic switches bank of fixed capacitors. George VK2YT. QTHR.

WANTED - VIC

COUNTERMEASURES RECEIVING EQUIPMENT from the RAAF Neptune aircraft, tuning units TN 128/APR9, TN 179/APR13, TN180/APR13. Also switch unit assembly SA 416/ALR8, remote control type C426/APR9 and C654/APR9. W Babb, VK3AQB QTHR.

COLLINS EQUIPMENT, any condition. 51S-1, 51J-3, 51J-4, 75S-3B, 75S-3C, 312B-4, 312B-5, 32S-3A, 302C-3, DL-1, KWM-2A, MP-1, PM-2, 516E2. Collins Parts, tubes or literature. VK3GY QTHR. (03) 7894363.

HANDBOOK OR PHOTOCOPY of manual for Marconi HF CCT mag meter TF886A. All costs reimbursed. Syd VK3ASC QTHR.

WANTED - WA

YAESU FT200 and spare parts, handbooks, ESP valves. Trying to rebuild 2/FT200 sets, would like to collect them also. Maurice VK6NST QTHR. Ph: (09) 4192951.

WANTED - QLD

AEA DR DX UNIT, suit C64 computer. Also Philips FM828 MkII A or B band for conversion to packet repeater. Ron VK4BRG QTHR. Ph: (079) 561155.

70227A Z759 valves AVO model 16 multimeter circuit TV single strength meter - old radio test equipment - circuit of Advance voltmeter (Nixie tubes) EF3533 valves - valve tester _ Sig generator. QTHR. (071) 961186.

WANTED ELECTRONIC KEYER. VK4EAB QTHR. Ph: (071) 835162.

KENWOOD TS-120S or similar equipment for beginner on HF (ie not too expensive). Contact via Glen VK4PPE, Ph: (07) 3762804 AH.

KENWOOD TS-120S or similar equipment for beginner on HF. (Ie: not too expensive). Ph Greg VK4CAL (02) 2875372 BH or (02) 856579 AH.

WANTED - TAS

MANUAL, INFORMATION OR SOFTWARE for Adler Alphatronic word processor. Postage refunded. Steve VK7SC QTHR. (002) 716349 BH, (002) 723489 AH.

TELL THE ADVERTISER YOU SAW IT IN AMATEUR RADIO

ADVERTISER'S INDEX

HAMADS

Please Note: If you are advertising items For Sale and Wanted please use a separate form for each. Include all details; eg Name, Address, Telephone Number (and STD code), on both forms. Please print copy for your Hamad as clearly as possible.

*Eight lines free to all WIA members, ninth line for name and address Commercial rates apply for non—members. Please enclosed a mailing label from this magazine with your Hamad.

*Deceased Estates: The full Hamad will appear in AR, even if the ad is not fully radio equipment.

*Copy typed or in block letters to PO Box 300, Caulfield South, Vic 3162, by the deadline as indicated on page 1 of each issue.

*QTHR means address is correct as set out in the WIA current Call Book.

*A courtesy note will be forwarded to acknowledge that the ad has been received.

Ordinary Hamads submitted from members who are deemed to be in general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being re—sold for merchandising purposes.

Conditions for commercial advertising are as follows: $22.50 for four lines, plus $2.00 per line (or part thereof) Minimum charge — $22.50 pre—payable.

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❑ Miscellaneous
❑ For Sale
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Name: .....

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Radio Amateurs: Have you checked out EA lately?

No doubt most radio amateurs are aware that *Electronics Australia* is by far this country's largest-selling electronics magazine, as well as being its oldest (we began way back in 1922, as *Wireless Weekly*). But have you looked inside the magazine lately?

Remember Jim Rowe, VK2ZLO? Jim used to be Technical Editor, and then Editor – back in the late 1960's and 1970's. You may recall some of the amateur radio and test equipment projects he developed, which proved to be extremely popular. Well, Jim is back at the helm of the magazine, and has been busy giving it a new lease of life.

You'll now find lots of new 'departments' in the magazine, including Solid State Update (with news of new semiconductor devices), Silicon Valley Update (news from the USA) and What's New in Entertainment Electronics. Plus all of your old favourites like Forum, The Serviceman, Circuit and Design Ideas and so on. And of course plenty of 'meaty' technical articles and contruction projects.

FEATURES IN THE JULY ISSUE:

INTERVIEW WITH GROTE REBER

Inventor of the dish antenna, 'father' of radio astronomy – the famous Grote Reber is alive and well, and living in Tasmania. Tom Moffat tracked him down for this fascinating interview.

WHATEVER HAPPENED TO AMATEUR RADIO – THE RESPONSE

What did your fellow amateurs think of Jim Rowe's provocative piece in the April issue? The first batch of responses make interesting reading...

TV-DERIVED FREQUENCY STANDARD

Need to measure your frequencies *really* accurately? Here's the design for a unit which uses TV network signals to provide very close to Rubidium-standard accuracy.

What about *amateur radio* projects? Well, there still aren't too many, at present – Jim Rowe's been a bit too busy! But he's *very* interested in boosting the amateur radio content, so if YOU have developed an exciting amateur radio project, please contact Jim by writing to him at EA, 180 Bourke Road, Alexandria 2015 or phoning him on (02) 693 6620 – to discuss the possibility of publishing it as a contributed article.

Take a look at the new, rejuvenated *Electronics Australia* – on sale at your newsagent at the beginning of every month. Or subscribe now, by phoning (02) 693 9517 or 693 9515.

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